

INFORMATION SERVICES PRICING, VOL. II  
SOFTWARE PRODUCTS AND PROFESSIONAL SERVICES

INPUT



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Planning Services for Management

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INFORMATION SERVICES PRICING  
TRENDS AND TECHNIQUES  
VOLUME II  
SOFTWARE PRODUCTS AND  
PROFESSIONAL SERVICES

DECEMBER 1983

INFORMATION SERVICES PRICING TRENDS AND TECHNIQUES  
VOLUME II  
SOFTWARE PRODUCTS AND PROFESSIONAL SERVICES

ABSTRACT

This report identifies changes that are taking place in pricing structures and policies among software products and professional services vendors. The primary focus is on mainframe/minicomputer-based software.

Included in the report are analyses of pricing changes, discounting practices, user attitudes toward service, and the bases of competition as perceived by both vendors and users.

Vendor plans are discussed, including pricing issues that deal with personal computer-related services and the increasingly competitive marketplace. Hourly rates for programmers and analysts are profiled.

Finally, a chapter on strategic objectives in the pricing process is included. This chapter presents a closer examination of the key pricing factors identified throughout the report.

This report contains 131 pages, including 56 exhibits.



INFORMATION SERVICES PRICING TRENDS AND TECHNIQUES  
VOLUME II  
SOFTWARE PRODUCTS AND PROFESSIONAL SERVICES

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## I INTRODUCTION



## I INTRODUCTION

### A. OBJECTIVE AND SCOPE

- This study was produced by INPUT as part of the Information Services Industry Program (ISIP). This is Volume II of a two-part study, Information Services Pricing Trends and Techniques. This second volume of the study focuses on the pricing of software products and professional services.
- INPUT's objective is to help clients improve market penetration and profitability by identifying changes and innovations in pricing techniques that have strategic implications for the 1983-1985 period.
- Software products will be analyzed with respect to applications software products and systems software products.
- Professional services will be segmented and analyzed with respect to government and commercial applications.
- Specific issues investigated in this study include the following:
  - Pricing structures and policies employed by vendors.
  - Pricing method preferences of users.



- Vendors' perceptions of user attitudes with respect to buying and pricing.
  - Users' buying criteria and pricing sensitivity.
  - Changes in pricing and reasons for the changes.
  - The extent of discounting from both the vendors' and users' perspectives.
  - Innovative pricing approaches being used or introduced.
  - The pricing process employed by vendors.
- This volume is a follow-up to two INPUT pricing studies conducted for the ISIP program:
    - Trends in Computer Services Pricing, 1980.
    - Trends in Services Pricing, 1978.
  - This area of research was selected because of high client interest (as indicated by an INPUT poll of clients) and because INPUT believes it is a particularly critical issue at this time of increasing competition.

## B. METHODOLOGY

- The research included 61 interviews with representative software products and professional services vendors as well as an independent, random sample of users of these services. The interviews were conducted by telephone during the second and third quarters of 1983.

- Thirty interviews were collected from the following numbers and types of vendors:
  - Eight applications software vendors.
  - Nine systems software vendors.
  - Six vendors of professional services to government users and seven vendors of professional services to the commercial marketplace.
- Thirty-one interviews were made with the following numbers and types of users:
  - Eleven applications software users.
  - Twelve systems software users.
  - Five commercial users of professional services.
  - Three federal government users of professional services.
- In five cases the same company was interviewed as a representative user of more than one service. In all cases, however, the responses from these users are included in the analyses only once and are never counted twice.
- The user interviews were conducted with decision makers who selected and bought the type of service being researched.
- The vendor interviews were conducted with senior executives who had some responsibility for setting both pricing policy and prices. Respondents were relatively evenly divided between marketing and administrative departments.

- Vendors were asked to provide confidential information about pricing policies and plans. The respondents who participated in the data collection are therefore not identified in this report.
- Definitions of terms used in this study are included in the text as well as in Appendix A.
- Copies of the vendor and user questionnaires are included as Appendices B and C.
- Related INPUT reports are listed in Appendix D.



## II EXECUTIVE SUMMARY



## II EXECUTIVE SUMMARY

- This executive summary is designed in a presentation format in order to:
  - Help the busy reader quickly review key research findings.
  - Provide a ready-to-go executive presentation, complete with script, to facilitate group communications.
- The key points of the entire report are summarized in Exhibits II-1 through II-8. On the left-hand page facing each exhibit is a script explaining its contents.

A. PRICING TRENDS AND TECHNIQUES: SOFTWARE PRODUCTS AND PROFESSIONAL SERVICES

- This research report was produced as part of INPUT's Information Services Industry Program (ISIP).
- Astute pricing decisions for software products and professional services are especially important in today's rapidly changing marketplace: buyers are more sophisticated and competitors are more plentiful.
- The research scope of this report addresses such issues as current pricing practices, changing pricing structures, and the extent and kinds of discounts. The primary focus is on mainframe- and minicomputer-based software.
- Also included are user attitudes toward services and their degrees of price sensitivity.
- In addition, vendor pricing plans and innovations are discussed. Vendor plans include pricing that deals with both the personal computer "threat" and an increasingly competitive market.
- The remainder of this executive summary highlights key findings and recommendations.



# **PRICING TRENDS AND TECHNIQUES: SOFTWARE PRODUCTS AND PROFESSIONAL SERVICES**

- **Changing Market Requires More Pricing Attention**
  
- **Research Scope**
  - **Current Pricing Practices**
  
  - **User Attitudes**
  
  - **Vendors' Pricing Plans**

## B. SOFTWARE PRODUCT PRICING VARIATIONS ARE INCREASING

- Software products vendors are showing an increased willingness to experiment with different methods of pricing.
- In many cases, the pricing techniques used by systems software product vendors could also be profitably used by applications software vendors, and vice versa.
- For example, lease/rental plans are three times more common with systems software vendors than with applications vendors, who rely primarily on purchase sales. Lease/rental contracts not only help establish a competitive edge, but help eliminate revenue fluctuations, which historically have wreaked havoc with long-term planning, not to mention investor confidence.
- Thirty-five percent of respondents have some form of usage pricing in effect. Examples include transaction pricing, pricing based on CPU size and/or number of terminals. More of this type of pricing is forecast.
- The use of discounts will increase from 32% of all customers to 46% in the next few years. In most cases, however, discounts are applied as a reduced price for additional sales, rather than as a reduction for the first sale. Most frequently applied discounts are for additional products to the same customer, or for additional computer sites and/or CPUs for the same product.
- Maintenance services will provide an increasingly important source of revenue. Applications vendors report an average maintenance price of 9% of the software package price, while systems software suppliers are obtaining an average of 12%. Because systems software maintenance requires a more technically proficient and less readily available resource, these vendors will continue to command a higher maintenance charge.

## **SOFTWARE PRODUCTS PRICING VARIATIONS ARE INCREASING**

- **Lease/Rental 3 Times More Common with Systems Software**
- **35% Have Usage Pricing, More in Future**
- **Discounting Frequency Increasing from 32% to 46%**
- **Maintenance Fee Differences**
  - **Applications = 9%**
  - **Systems = 12%**

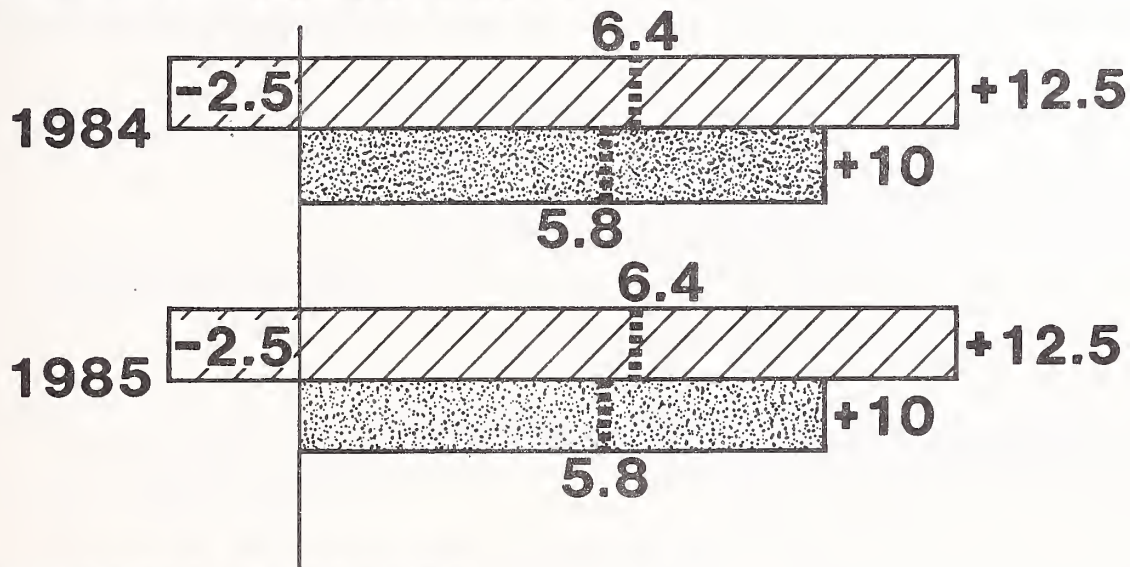
C. BOTH USERS AND VENDORS FORESEE INFLATION LEVEL PRICE INCREASES

- Applications software users anticipate that vendors will increase their prices an average of 6.4% per year for 1984 and 1985.
- Vendors report a slightly lower 5.8% for the same period.
- In the systems software marketplace, users and vendors foresee average price increases nearly two percentage points higher than in the applications software market.
- For 1984 users expect average price increases of 8.6% on system software products. This is a full percentage point higher than the average 7.6% price increase foreseen by the applications vendors.
- During 1985 systems software users and vendors are more in accord as they anticipate price increases of 7.4% and 7.6% respectively.
- The price increase outlook for systems software is, in general, more unsettled than in the applications software market. In every case the range of responses was greater for systems software. In addition, for 1984, the differential between the average price increase expected by the user and the average price increase expected by the vendor was almost twice as great for systems software as it was for applications software.
- In all cases, price increases are expected to stay within the range of inflation.

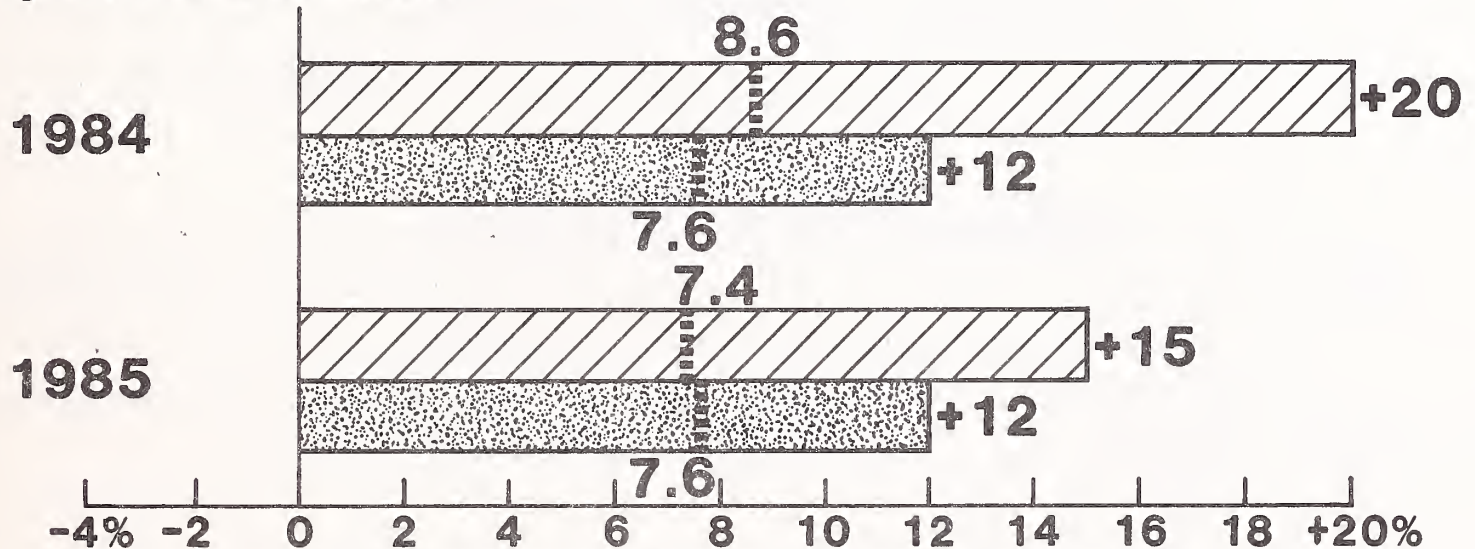


# BOTH USERS AND VENDORS FORESEE INFLATION LEVEL PRICE INCREASES

## Applications Software



## Systems Software



Percent Price Increases

(Mainframe/Mini Software Products)

▨ Users

▤ Vendors

⋮ Mean Response

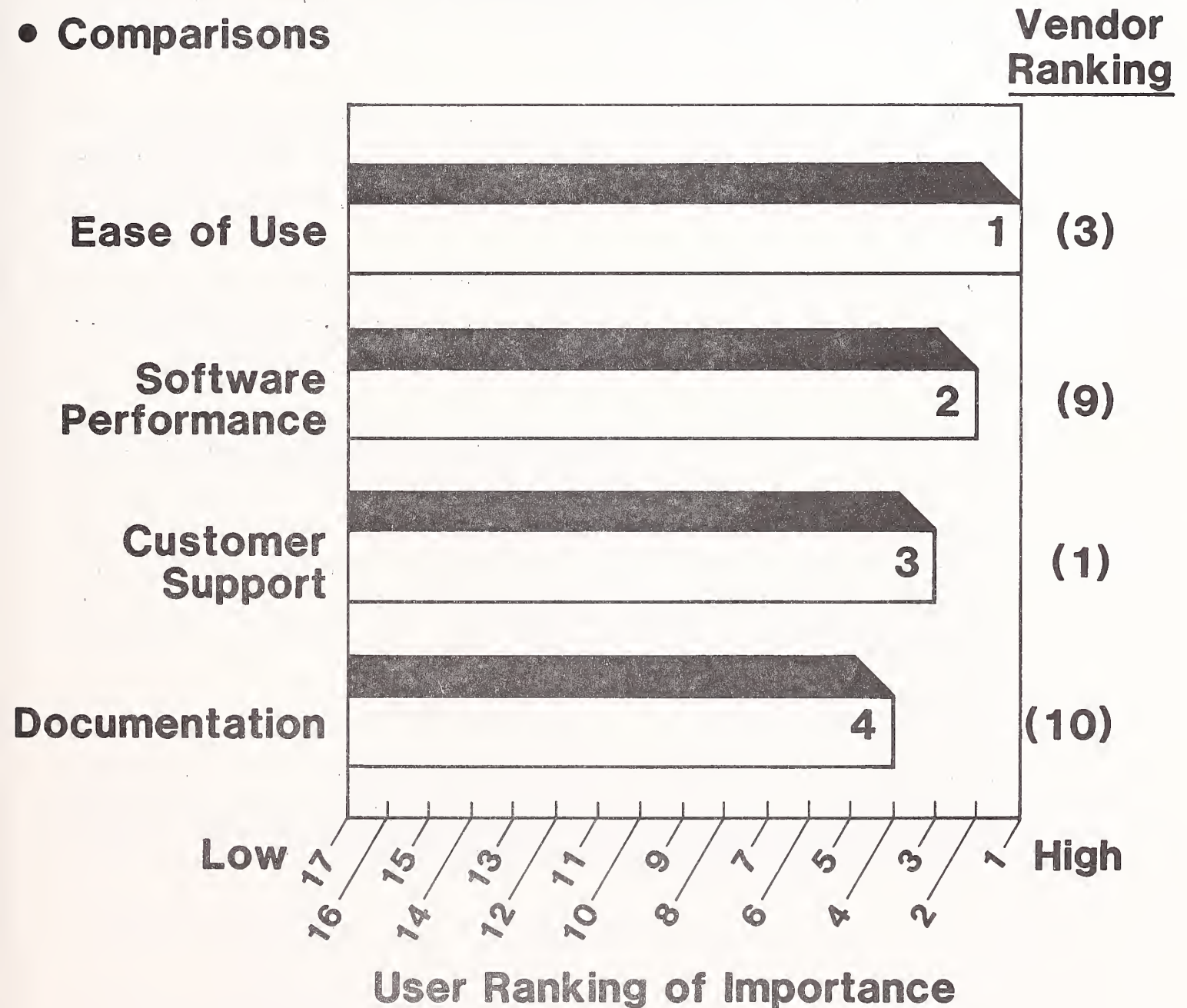


D. SOFTWARE PRODUCT VENDORS MISPERCEIVING USERS' TOP  
DECISION-MAKING CRITERIA

- Vendors do not understand what software products users are looking for.
  - When asked to rank the importance of 17 decision criteria, users specified that ease of use was number one. Vendors placed it third.
  - Users stated that software performance was second most important. Vendors ranked it a distant ninth.
  - Vendors overestimated the importance of customer support, putting it in first place. Users said it was third.
  - Users rated documentation highly, with a fourth place rank. Vendors placed it in far away tenth.
- Users are giving an important message to vendors. Two of users' top four decision-making criteria were based on characteristics of the software itself. There is no substitute for a well designed and documented software product that fits the user like a glove.
- There are 15 criteria for decision making that users consider more important than price. In addition to the four nonprice-related criteria mentioned above, such factors as vendors' maintenance commitment, reputation, financial stability, applications and industry knowledge are considered more important than price.

# SOFTWARE PRODUCT VENDORS MISPERCEIVING USERS' TOP DECISION-MAKING CRITERIA

## • Comparisons



- There are 15 Criteria More Important to Users Than Price

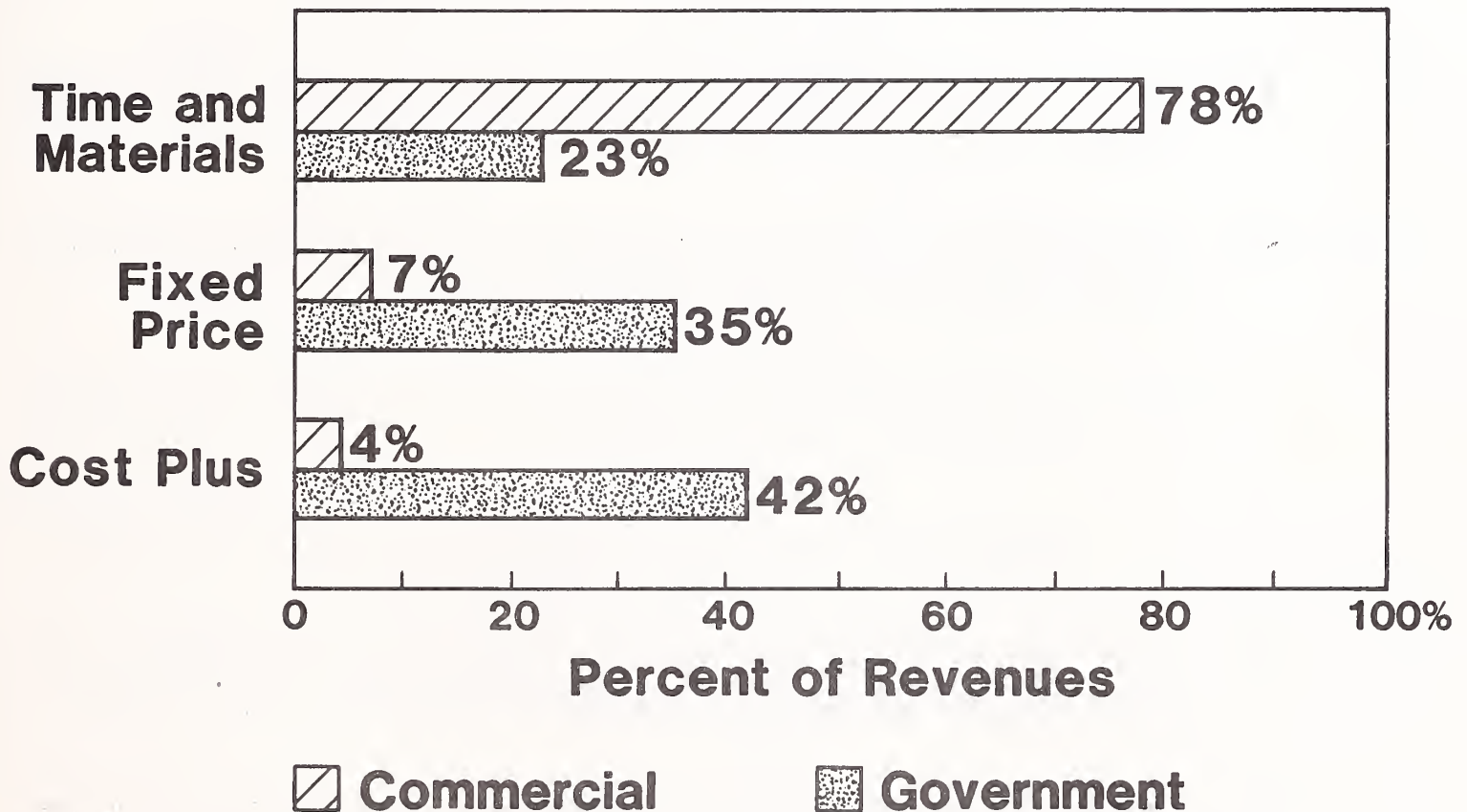
## E. PROFESSIONAL SERVICES USERS HAVE DISTINCT PRICING NEEDS

- The pricing structure accepted by users varies significantly by market segment. Professional services vendors to the commercial marketplace report that time and materials pricing is currently accounting for 78% of their revenues, in contrast to 23% of revenues reported by vendors to the government.
- A sharp distinction also occurs with fixed-price contracts, except that the amount of use is reversed. Commercial vendors report only 7% of revenues coming from this pricing approach, whereas government vendors indicate 35%.
- Cost plus pricing shows the largest difference between the two market segments. Vendors to the commercial marketplace earn only 4% of their revenues from this method, whereas government vendors earn 42%.
- When asked to project how the above pricing methods might change by 1985, vendors reported only small changes. Commercial vendors forecast an increase in fixed-price contracts from a current level of 7% to 10%. This will be matched by a decline in time and materials from 78% to 75% of all revenues. Government vendors indicated a decline in time and materials contracts from 23% to 21%. This was matched by an increase in cost-plus-based contracts from 42% to 44%.
- In the future price increases will decline as an important source of revenue. The percentage of revenue attributable to this strategy will decline from the 22% level of the past two years to 13% for the 1983-1984 period.



# PROFESSIONAL SERVICES USERS HAVE DISTINCT PRICING NEEDS

- Continued Sharp Commercial/Government Distinction



- Price Increases Declining as a Revenue Source

1980-1982  22%

1983-1984  13%

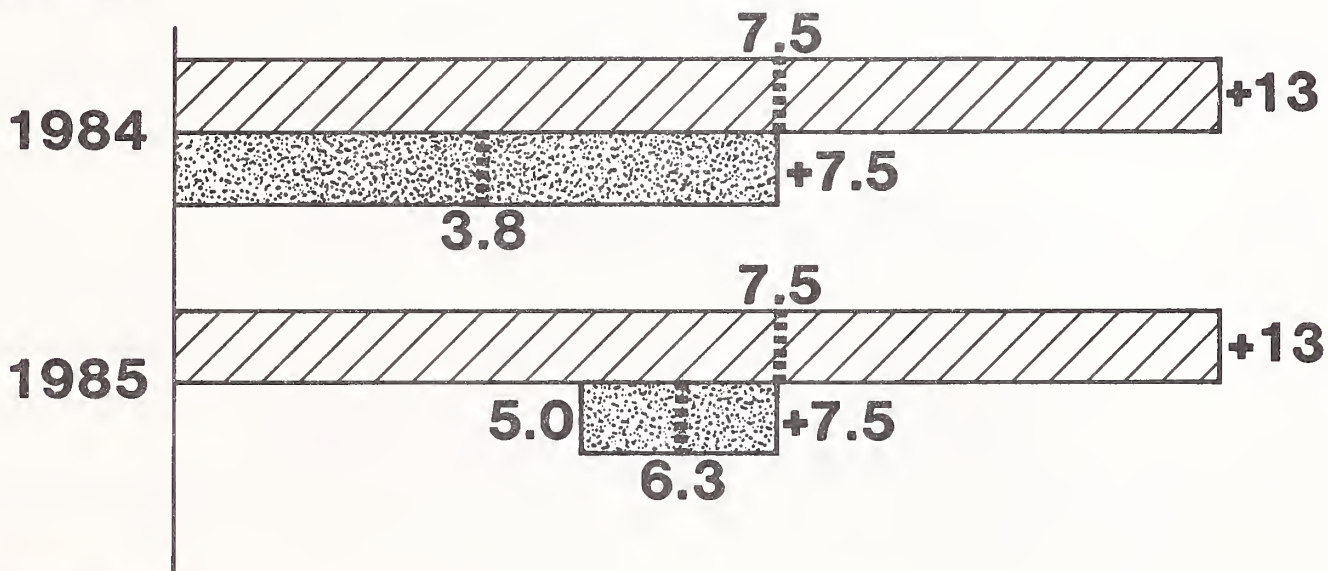
**F. PROFESSIONAL SERVICES USERS AND VENDORS DISAGREE ON PRICE INCREASE MAGNITUDE**

- Commercial and government segment users and vendors have different outlooks on expected price increases for the next two years.
- Commercial users are expecting a 7.5% price increase for 1984. This is almost twice as large as the 3.8% that vendors are expecting.
- By 1985 users and vendors are more in agreement. Users are expecting another 7.5% increase and vendors are predicting 6.3%.
- In the government marketplace, the outlook is reversed: vendors predict price increases almost twice as high as those users predict.
  - In 1984 vendors are looking for a 6.2% increase on the average, whereas users forecast a 3.3% rise.
  - During 1985 the same pattern is predicted by both users and vendors.
- In all cases, expected price increases for both the commercial and government market segments for 1984 and 1985 are not exceeding likely inflation rates.
- Because of the discrepancies between users and vendors, vendors are cautioned to carefully evaluate the marketplace before making any decisions regarding price increases. Alternatives to professional services continue to proliferate in the form of new software packages and new productivity tools such as fourth-generation languages, which help users help themselves.

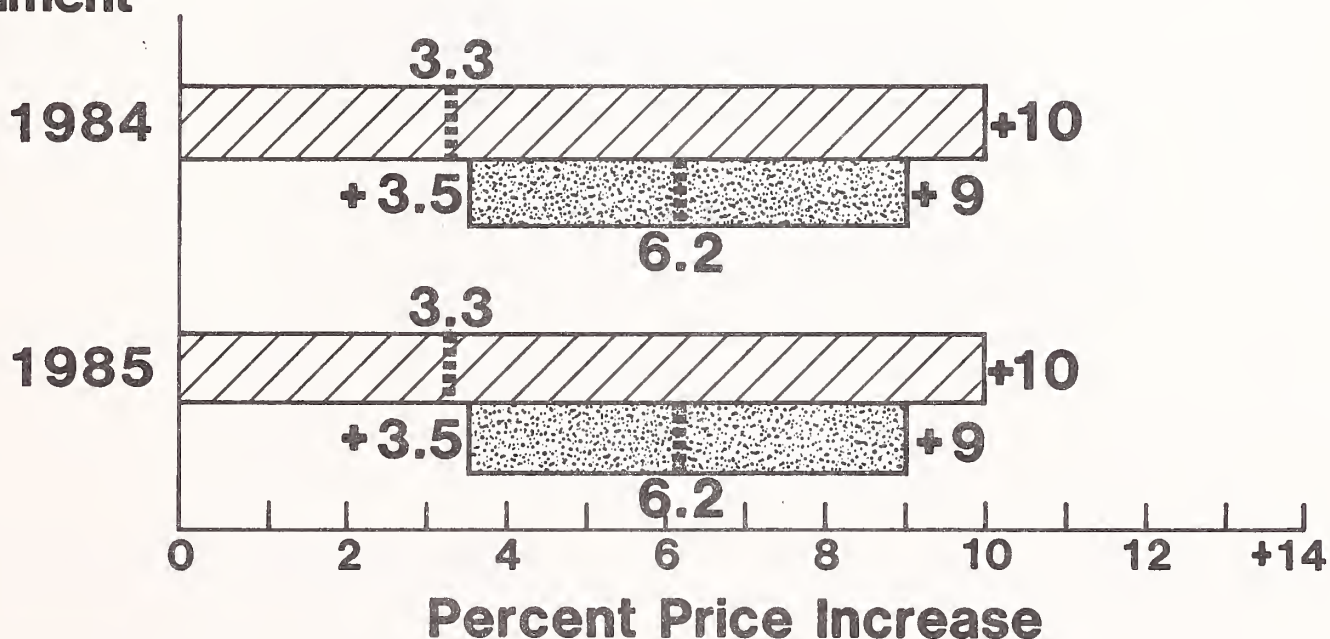


# PROFESSIONAL SERVICES USERS AND VENDORS DISAGREE ON PRICE INCREASE MAGNITUDE

## Commercial



## Government



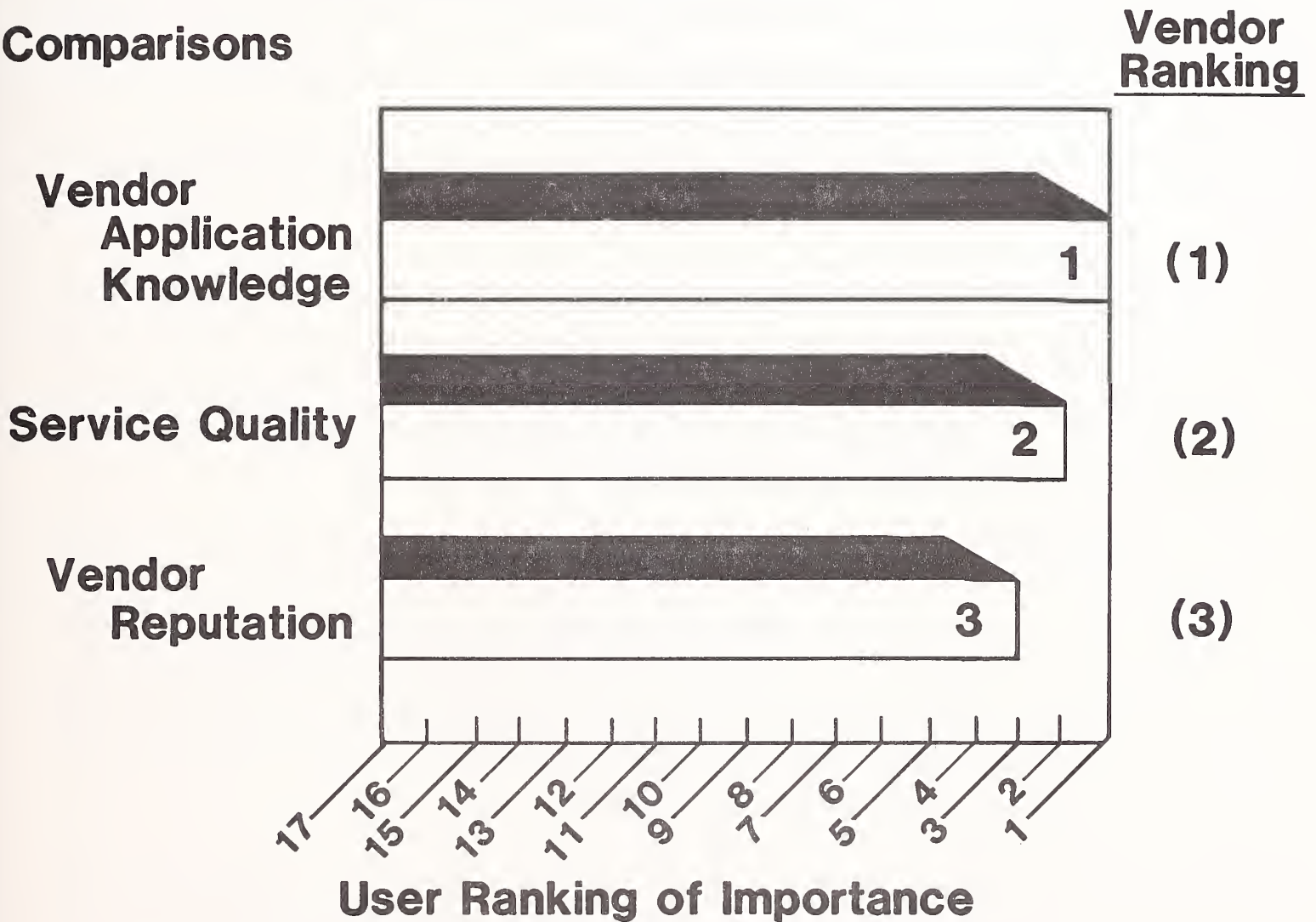
Users
 Vendors
 Mean Response

G. PROFESSIONAL SERVICES USERS AND VENDORS AGREE ON TOP  
DECISION-MAKING CRITERIA

- When asked to rank the importance of 10 criteria to the decision to utilize professional services, users and vendors agreed on the top three:
  - Vendor application knowledge was first.
  - Service quality was second.
  - Vendor reputation was third.
- The largest discrepancy was in the ranking of the importance of vendors' industry knowledge. Vendors placed it fourth whereas users rated it seventh.
- Commercial users showed more sensitivity to price than government users.
  - Commercial buyers placed price as fourth in importance out of 10 criteria (vendors rated it sixth in the belief that vendor industry knowledge and customer support were more important).
  - Government users and vendors agreed that pricing was ranked sixth behind criteria such as customer support.

# PROFESSIONAL SERVICES VENDORS AND USERS AGREE ON TOP DECISION-MAKING CRITERIA

## • Comparisons



## • Price Ranking (10 Criteria)

- Commercial = 4th
- Government = 6th



## H. RECOMMENDATIONS

- Vendors should make sure that they have an accurate understanding of users' changing decision criteria. Although professional services vendors better understood the decision criteria of their users than did software products vendors, there was still room for improvement. Misunderstanding user decision criteria can result in enormous amounts of waste resources in product design, sales support, sales promotion, and recruiting and training.
- Pricing should be viewed as a creative process that offers strategic opportunities to enhance the competitive edge.
  - Vendors are cautioned to address price increase decisions with care. Although users in every segment researched for this report expect price increases, there were discrepancies concerning how much. Price increases work best when the vendor has unique strengths in areas users consider highly important.
  - Applications software vendors are urged to put more emphasis on leasing and renting software products. This approach not only makes it easier for many prospects to buy, but also helps to differentiate the offering. It is financially dangerous to strive for sustained revenue and profit growth when no significant lease/rental base exists to smooth out inevitable sales fluctuations.
  - Discounts can be creatively used in a variety of situations. The primary emphasis should be on discounts for incremental sales, such as for additional sites or modules, where the sales costs are known to be lower.
  - Software product vendors are urged to implement usage pricing, which would be another step toward fully realizing the added value of a product.

## **RECOMMENDATIONS**

- **Understand Changing Decision Criteria**
- **Price Creatively to Enhance Competitive Edge**
  - **Treat Price Increases with Caution**
  - **Lease More Applications Software**
  - **Focus Discounts on Incremental Sales**
  - **Implement Use Pricing**





**III SOFTWARE PRODUCTS VENDORS' PRICING  
PRACTICES AND ATTITUDES**



### III SOFTWARE PRODUCTS VENDORS' PRICING PRACTICES AND ATTITUDES

#### A. VENDOR PROFILE

- The companies included in the research are representative of the information industry at large; they range from the very small (\$1 million in revenue) to those among the largest vendors (\$472 million), as shown in Exhibit III-1. In general, respondents based their comments on their mainframe software business. However, since microcomputer software revenue is an increasing revenue stream for these vendors, a special series of questions was addressed in the study.
- Principal types of revenue for these vendors, as shown in Exhibit III-2, included all modes of information services but, by definition, the majority of their revenue is derived from applications or systems software. Interestingly, both types of vendors did indicate that approximately 20% of the company's 1982 revenue was derived from other services, including processing services and integrated systems.
- The largest revenue-producing software product for each of these vendors is indicated in Exhibit III-3. While a variety of products were mentioned by the companies, applications software vendors most frequently mentioned financial transaction packages while systems software vendors mentioned control software, query languages, and file management packages.

# EXHIBIT III-1

## RESPONDENT VENDOR REVENUE SOFTWARE PRODUCTS

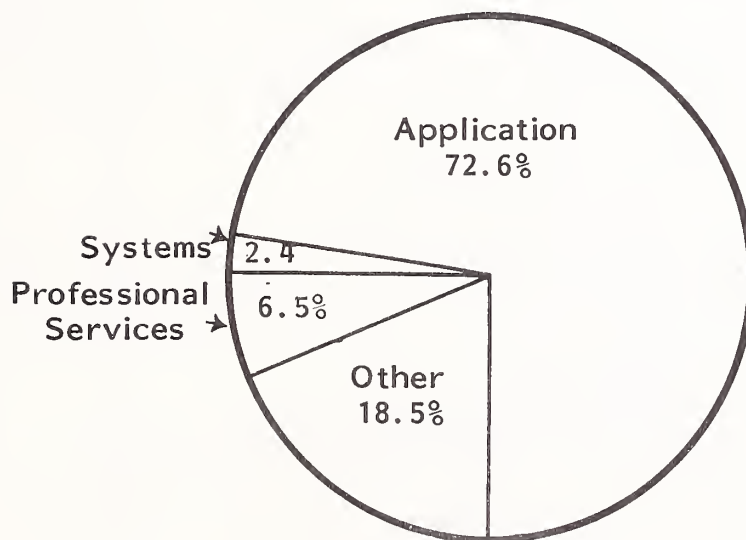
TYPE OF COMPANY	NUMBER OF COMPANIES	REVENUE (\$ Millions)	
		RANGE	AVERAGE
Applications	7*	\$2.5 - 200	\$ 76.03
Systems	9	1.0 - 472	103.24
Total	16	\$1.0 - 472	\$ 91.34

\* One applications software vendor did not supply company revenue data.

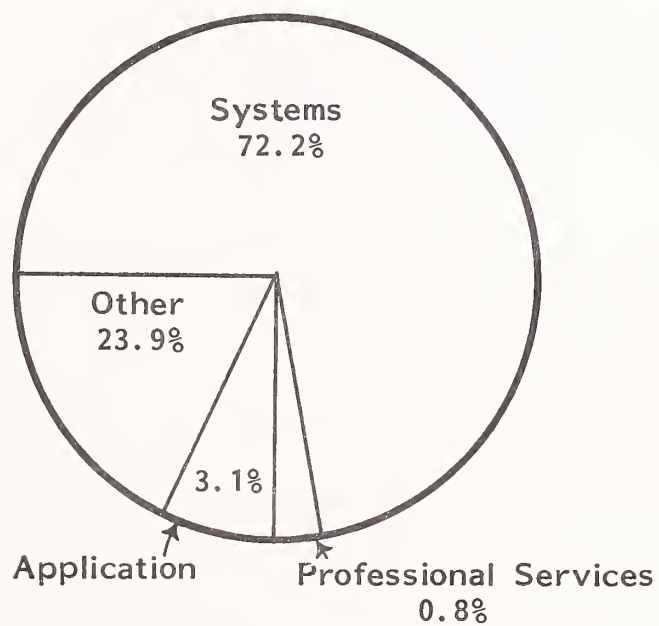
EXHIBIT III-2

PRINCIPAL TYPES OF SERVICE OF  
RESPONDENT SOFTWARE PRODUCTS VENDORS

Applications Software Companies



Systems Software Companies





## EXHIBIT III-3

LARGEST REVENUE-PRODUCING APPLICATION CATEGORY  
OF RESPONDING SOFTWARE PRODUCTS VENDORS

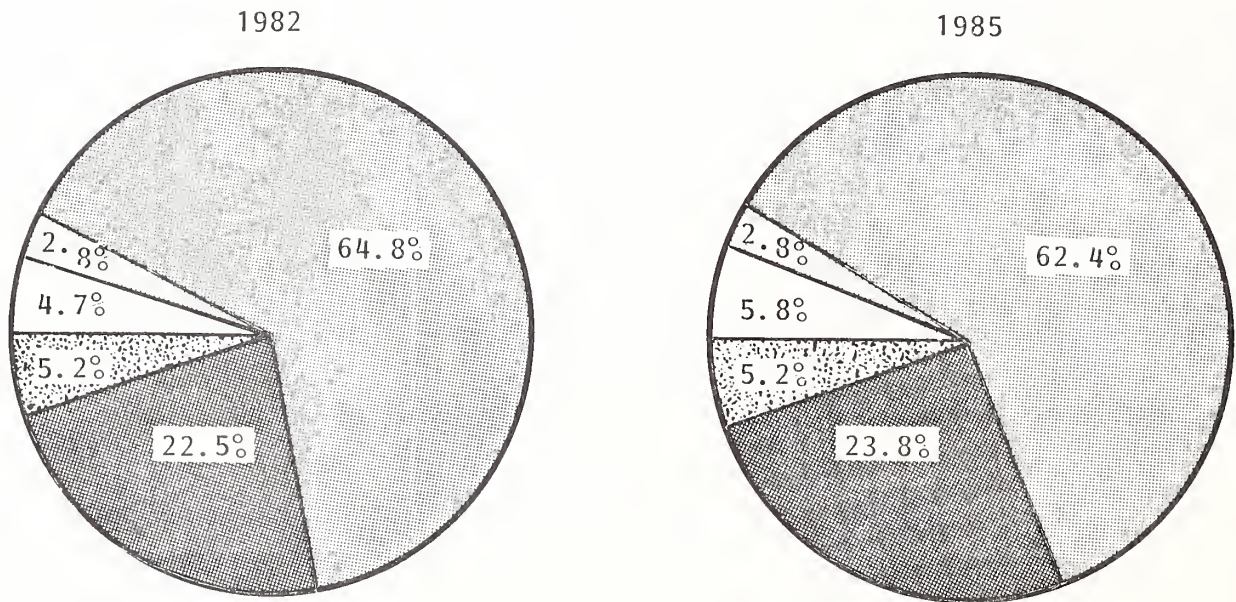
TYPE OF VENDOR	APPLICATION CATEGORY	PRICE (\$ thousands)
Applications Software		
Vendor A	Financial (Transaction)	\$65.0
B	Financial (Transaction)	65.0
C	Financial (Transaction)	75.0
D	Financial (Analysis)	190.0
F	Industry-Specific On-Line Applications	N/A
G	Financial (Transaction)	52.0
H	Financial (Transaction)	N/A
Systems Software		
Vendor A	System Control	70.0
B	Query Language	90.0
C	Query Language	72.0
D	Data Center Management	55.0
E	Program Management	30.0
F	File Management	3.7
G	System Control	24.0
H	Query Language	85.0
I	File Management	139.0

- Some differences in revenue source between the two types of software products vendors were noted. As shown in Exhibit III-4, packaged software and maintenance were the primary sources of revenue for applications software vendors. Systems software vendors, on the other hand, derived nearly 20% more of the company's revenue from packaged software alone. Maintenance contributed approximately 10% less to these companies than to applications software vendors. This picture seems likely to continue through 1985 with the vendors indicating very little change in their source of revenue mix. As one vendor noted, software development demands a large investment so vendors are reluctant to make many changes.
- Vendors indicated that revenue increases had been favorable during the 1980-1982 period and were likely to stay favorable in the 1983-1984 period, as shown in Exhibit III-5.
  - For the applications software vendors interviewed, the average revenue increase for the two-year period 1980-1982 was a healthy 58.2%. Systems software vendors indicated an equally healthy 49.3% increase in company revenue for the same period.
  - For the two-year period, 1983-1984, applications software vendors are anticipating a 12% decline in the rate of revenue growth to a very respectable 46.7% average increase. Systems software vendors, on the other hand, are predicting a modest growth of 4% to an average company revenue increase of 51.3%.
- These same vendors, while reluctant to discuss profit margins for 1982, indicated that most of the companies represented did improve their pretax margins in 1982. Only one of the vendors indicated a decline in profit margins during 1982. When asked how their margins compared to the industry as a whole, three vendors placed their company's margins above the average while five placed theirs at or below the industry average.

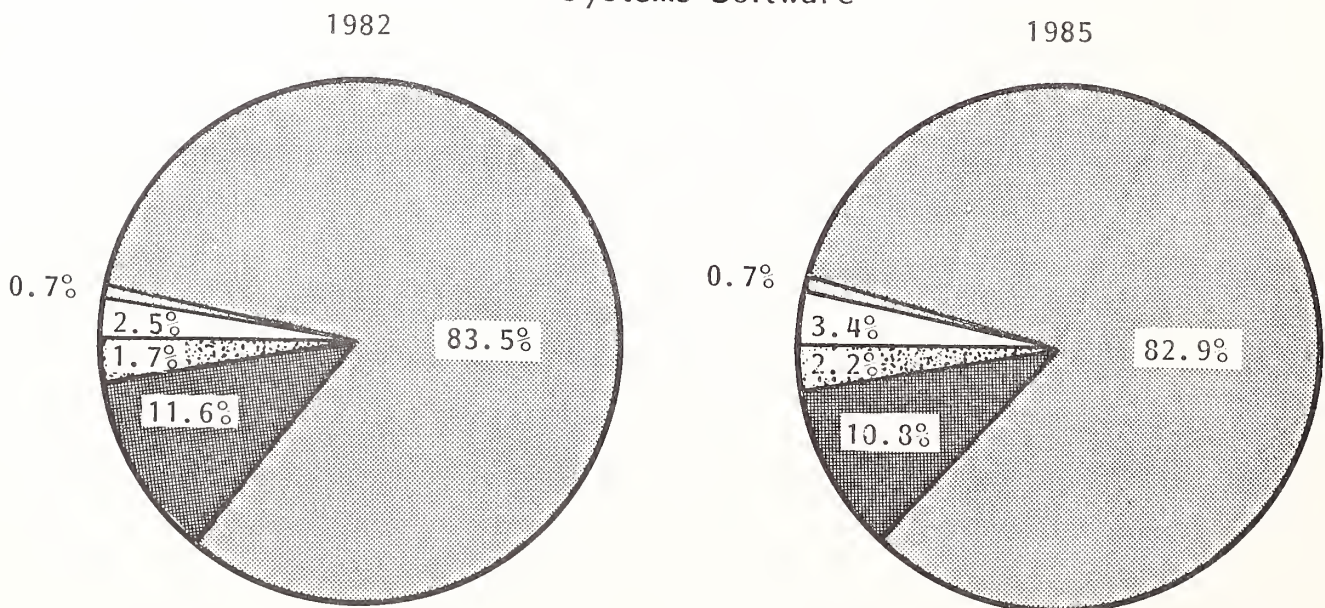
# EXHIBIT III-4

## SOURCES OF REVENUE BY SERVICE MODE OF RESPONDENT VENDORS (1982-1985)

### Applications Software



### Systems Software





# EXHIBIT III-5

## AVERAGE REVENUE INCREASE BY RESPONDENT SOFTWARE VENDORS

TYPE OF COMPANY	PERCENT INCREASE IN REVENUE			
	1980 - 1982		1983 - 1984	
	RANGE	AVERAGE	RANGE	AVERAGE
Applications	32.5 - 114%	58.2%	40 - 60 %	46.7%
Systems	7.0 - 100	49.3	35 - 100	51.3
Total	7.0 - 114%	53.1%	35 - 100%	49.3%

- Actual pretax margins for the years 1980, 1981, and 1982, for the eight respondents who provided data, are presented in Exhibit III-6.

## B. PRICING CHANGES AND INNOVATIONS

- It is clear that the software industry has been experiencing incredible growth in revenue and very respectable pretax profit margins. The questions raised by this study include issues such as the extent to which this growth is attributable to pricing changes and the likelihood that such impact can be sustained in the future.

### 1. PRICING INCREASES

- Software products vendors do not acknowledge a significant contribution from pricing increases on company revenue, as shown in Exhibit III-7. In fact, according to the respondents in this study, less than 6% of the revenue increases cited above were attributed to pricing during the period 1980-1982. Many vendors reported that pricing changes were not a factor in 1980-1982 and would not be a factor in 1983-1984. Only one vendor reported an impact of pricing on revenue increases as large as 25%.
- Pricing increases, according to the respondents, will have less of an impact in 1983-1984. For this period the pool of respondents predicted an overall impact by pricing of 4% of revenue.

### 2. PRICING METHODS

- Most vendors price on a lump sum purchase basis although additional methods - installment, purchase, annual fee (lease or rental), and "other" - are used, as shown in Exhibit III-8. The largest secondary method is an annual



EXHIBIT III-6

PRETAX PROFIT MARGINS OF  
RESPONDENT SOFTWARE PRODUCTS VENDORS

TYPE OF COMPANY / YEAR	PRETAX PROFIT MARGINS	
	RANGE	AVERAGE
<b>Applications</b>		
1980	4.6 - 40.0%	18.2%
1981	3.9 - 40.0	19.0
1982	3.0 - 30.0	18.0
<b>Systems</b>		
1980	0.0 - 20.0	10.1
1981	0.0 - 18.5	11.5
1982	0.0 - 18.5	11.0
<b>Total</b>		
1980	0.0 - 40.0%	13.6%
1981	0.0 - 40.0%	15.2%
1982	0.0 - 30.0%	14.5%

EXHIBIT III-7

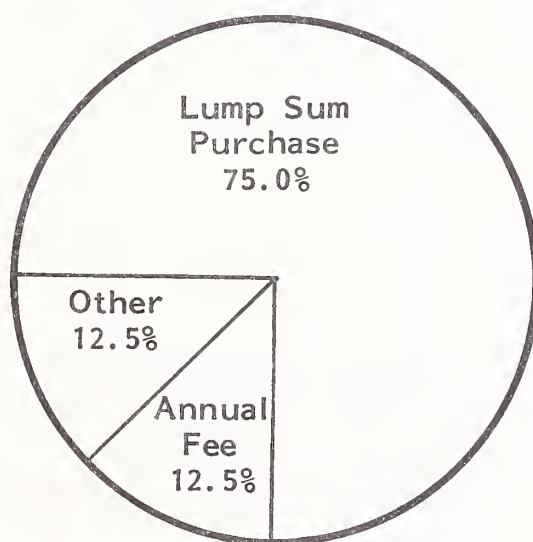
REVENUE CHANGES ATTRIBUTABLE TO PRICE INCREASES  
BY RESPONDENT SOFTWARE PRODUCTS VENDORS

TYPE OF COMPANY	REVENUE CHANGE		
	AVERAGE	ATTRIBUTABLE TO PRICE INCREASES	
		RANGE	AVERAGE
Applications			
1980 - 1982	58.2%	0 - 25%	7.2%
1983 - 1984	46.7	0 - 10	4.3
Systems			
1980 - 1982	49.3	0 - 15	4.4
1983 - 1984	51.3	0 - 10	4.4
Total			
1980 - 1982	53.1%	0 - 25%	5.6%
1983 - 1984	49.3%	0 - 10%	4.4%

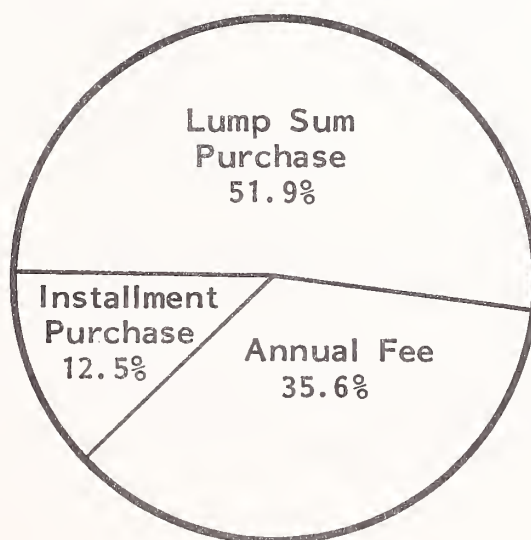
## EXHIBIT III-8

### PRICING TECHNIQUES OF RESPONDENT SOFTWARE PRODUCTS VENDORS

#### Applications Software



#### Systems Software



fee: particularly for systems software vendors. Lease options accounted for over one-third of the revenue reported by systems software vendors.

- There is internal discussion among many vendors as to the best pricing method. Thirty-five percent of the software products vendors indicated they had changed methods recently or would do so in the future. The changes reported include:
  - Centralized maintenance with a license fee.
  - Annual subscription fee.
  - Product bundling to add more features (and, presumably, increase the value and price).
  - Move to lease in order to stabilize revenue stream.
  - Move from price based on size of operating system to use based on the number of terminals.
- Thirty-five percent of the respondents also indicated they had some form of usage or transaction pricing structure. Vendors reported a variety of methods of usage pricing, including pricing on the size of the user's system or the size and type of the client's portfolio of business. Other respondents who did not offer usage or transaction pricing indicated their interest in this topic. Among their comments:
  - "Would like to offer transaction pricing but afraid banks would balk."
  - "Not currently offered but idea has been discussed. May change in 1985-1986 to pricing based on performance capacity of client's CPU."

- "Have discussed the possibility of charging on the basis of the number of terminals on the system."
- "Would like to, but it's hard to identify and implement."

### 3. PRICING OF AUXILIARY SERVICES

- Only 12% of the responding software products vendors do not have a separate software maintenance charge. Most vendors charge between 10-25% of the software purchase price for maintenance with a 10% rate the most frequently mentioned for systems software vendors and a 12% rate for applications software product firms.
- Hourly rates for analysts and programmers supplied by software product vendors are presented in Exhibit III-9. The exhibit indicates that, while the rates vary from a low of \$40 per hour to a high of \$125 per hour, the average minimum/maximum rate is \$61 to \$87 for analysts and \$82 to \$106 for programmers.
- Fifty-nine percent of the vendors also indicated that they had personal computer software available to their clients. In general, these products were developed in-house although some vendors indicate that they acquired the rights to the product through a third-party arrangement.
- Pricing terms indicate a variety of approaches although responding vendors see software for the personal computer as a new revenue stream and not just a necessary expense of marketing mainframe software. Separate fees for mainframe and personal computer software are typical with no maintenance fees on the personal computer product and volume discounting based on the number of PCs.



# EXHIBIT III-9

## RESPONDENT SOFTWARE VENDORS' PUBLISHED HOURLY RATES FOR ANALYSTS AND PROGRAMMERS

TYPE OF RATE	HOURLY RATES				
	APPLICATIONS		SYSTEMS		TOTAL AVERAGE
	RANGE	AVERAGE	RANGE	AVERAGE	
Analyst					
Minimum	\$40.00 - 125.00	\$ 80.70	\$25.00 - 62.00	\$43.50	\$ 61.31
Maximum	82.00 - 125.00	111.40	62.00 - 75.00	68.50	\$ 86.75
Programmer					
Minimum	40.00 - 125.00	80.70	62.00 - 125.00	83.17	\$ 81.63
Maximum	82.00 - 125.00	111.40	62.00 - 125.00	95.67	\$105.50
Total	\$40.00 - 125.00	\$96.05	\$25.00 - 125.00	\$72.71	\$ 83.80

### C. DISCOUNTING PRACTICES

- Extensive discounting has become a standard practice among most information services providers, and the software products vendors interviewed for this study were no different.
- Mainframe software products vendors reported that, on average, approximately 32% of the purchasers of software products received some sort of discount. This figure is expected to increase to approximately 46% of the software products vendors' customer base by 1985. Some vendors reported that they were discounting up to 90% of their customers, as shown in Exhibit III-10.
- Discounting practices took their toll on the revenue line according to the responding vendors. Both applications software vendors and systems software vendors reported that their discounted customers' revenue represented 38% of the company's revenue, as shown in Exhibit III-11. Some vendors reported that these customers represented as much as 85-99% of company revenues.
- The type and amount of discount offered varied by vendor with the only consistency being that no software products vendor reported the use of discounting based on term contracts or the attractiveness of the particular market segment. In general, the discounts were based on the inclusion of additional sites or additional products or were based on the fact that the client was an educational or governmental institution.
- The largest discount amounts were for other discount practices such as those used when a new product is introduced or when maintenance is heavily discounted as a special incentive to purchase the software. The second largest average discounted amount was for volume discounts, followed by discounts for additional sites, educational institutions, additional products, optional modules, and government institutions, as shown in Exhibit III-12.

## EXHIBIT III-10

FREQUENCY OF DISCOUNTING  
BY RESPONDENT SOFTWARE VENDORS

TYPE OF COMPANY	PERCENT OF RESPONDENTS		CUSTOMERS RECEIVING DISCOUNT			
	DISCOUNT	NO DISCOUNT	1982		1985	
			RANGE	AVERAGE	RANGE	AVERAGE
Applications	50%	50%	5 - 90%	38.5%	7.0 - 90%	54.0%
Systems	100	0	1 - 65	29.0	7.5 - 85	43.6
Total	76%	24%	1 - 90%	31.9%	7.0 - 90%	46.2%

EXHIBIT III-11

PERCENT OF RESPONDENT SOFTWARE VENDORS' REVENUE  
ACCOUNTED FOR BY CUSTOMERS RECEIVING A DISCOUNT

TYPE OF COMPANY	DISCOUNT CUSTOMERS AS A PERCENT OF REVENUE	
	RANGE	AVERAGE
Applications	3.5 - 99%	36.4%
Systems	5.0 - 85	38.4
Total	3.5 - 99%	37.8%

## EXHIBIT III-12

DISCOUNTING PRACTICES REPORTED  
BY ALL SOFTWARE VENDORS

DISCOUNT PRACTICE	PERCENT OF RESPONDENTS	DISCOUNT AMOUNT			
		MINIMUM		MAXIMUM	
		RANGE	AVERAGE	RANGE	AVERAGE
Additional Sites	29%	10-33%	22.0%	15- <sup>40</sup> <del>20</del> %	34.0%
Volume	12	20-25	22.5	40-50	45.0
Additional CPUs	24	10-33	20.8	20-69	38.5
Optional Modules	6	N/A	10.0	N/A	15.0
Additional Products	35	10-20	12.0	10-50	25.8
Government Sector	24	5-20	10.4	5-20	10.4
Education Sector	29	15-50	28.0	15-50	28.0
Other	24	10-30	21.3	30-100	48.3



- The overall discount amount when all vendors in the study are considered - even those who offer no discounts - is approximately 3-8%. However, if the discounted amount is recalculated and based on only those vendors who offer discounts and only on the actual discounts given, the discounted amount jumps to the 18-29% range.

#### D. VENDOR PERCEPTIONS OF USER ATTITUDES

- On average, mainframe software products vendors believe that customers expect software prices to increase only modestly in the 1983-1985 period: a 2.2% increase in 1983, and a 6.9% increase in 1984 and 1985, as shown in Exhibit III-13. Indeed, some vendors believe customers expect the price of mainframe software to decline by as much as 15%, according to one applications software respondent. The indication here is that vendors believe customers have a tendency to expect smaller increases than they are actually likely to receive.
- This point may be difficult to verify, but the manipulation of factors that offset price increases may help as a counterbalance. Exhibit III-14 depicts the software products vendors' ratings of 17 items that influence the buying decision. Vendors were asked to rate the importance of each factor to their customers on a scale from 1 (low) to 5 (high).
- The ratings reveal some very important perceptions held by vendors, including:
  - Customers want support and assurances that the vendor will maintain the product, but care less about the vendor's knowledge or financial stability.

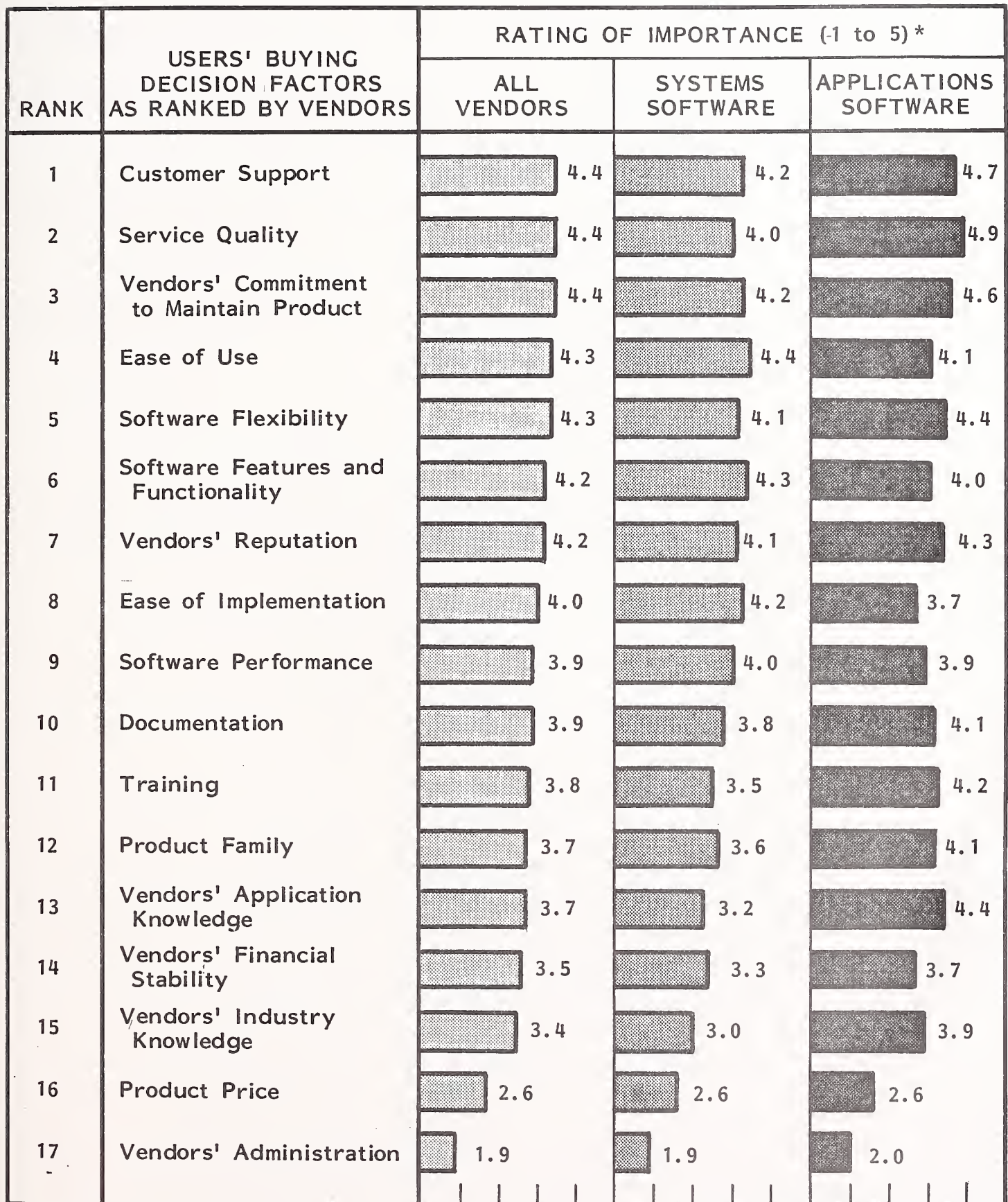
EXHIBIT III-13

SOFTWARE PRODUCTS VENDORS' PERCEPTIONS  
OF CUSTOMERS' EXPECTED PRICE CHANGES

TYPE OF COMPANY/ TARGET YEAR	PERCEPTION OF CUSTOMERS' EXPECTED PRICE CHANGES	
	RANGE	AVERAGE
<b>Applications</b>		
1983	-15 - 10%	1.0%
1984	0 - 10	5.8
1985	0 - 10	5.8
<b>Systems</b>		
1983	0 - 10	2.9
1984	0 - 12	7.6
1985	0 - 12	7.6
<b>Total</b>		
1983	-15 - 10%	2.2%
1984	0 - 12%	6.9%
1985	0 - 12%	6.9%

EXHIBIT III-14

RESPONDENT SOFTWARE PRODUCT VENDORS' RATINGS OF  
THE MOST IMPORTANT FACTORS CONSIDERED BY CUSTOMERS



\* Rating: 1 = Low, 5 = High



- Documentation and training, two aspects of support, are only moderately important.
  - Product quality is second only to this support in perceived importance.
  - Quality is defined firstly by the product's ease of use, flexibility, functionality, and only secondly by its performance.
  - Price is not an important criterion for buying decisions according to these vendors, and was ranked second from the bottom.
- User ratings of these same decision criteria are presented in the following chapter in Exhibit IV-13.

#### IV SOFTWARE PRODUCTS USER PROFILE





## IV SOFTWARE PRODUCTS USER PROFILE

### A. SOFTWARE USER PROFILE

- Of the software products users interviewed in this study 83% were vice presidents or directors of corporate management information systems. The remaining 17% were company representatives who were involved with research, planning, or financial administration.
- The companies involved in this study represented a variety of industries, as shown in Exhibit IV-1.
- User respondent company sales ranged from \$35 million to over \$2 billion, as shown in Exhibit IV-2. Average company sales for respondents identified as systems software users were twice those of applications software users' companies.
- Information services expenditures by these users averaged nearly \$5 million and ranged from \$0.8 million to \$20 million, as shown in Exhibit IV-3.
  - These expenditures are divided among applications software, systems software, and professional services (as well as other information services not included in this study) as depicted in Exhibit IV-4. The exhibit indicates that those respondents who were classified as systems software users expended a majority of their funds for systems software. Those users classified as applications software users, on the

# EXHIBIT IV-1

## TYPE OF INDUSTRY OF USER RESPONDENTS

TYPE OF INDUSTRY	NUMBER OF RESPONDENTS
Process Manufacturing	6
Discrete Manufacturing	4
Insurance	4
Government	3
Transportation	2
Utilities	2
Banking	1
Education	1
Total	23

# EXHIBIT IV-2

## COMPANY SIZE OF SOFTWARE PRODUCTS USERS

TYPE OF USER	SALES (\$ Millions)	
	RANGE	AVERAGE
Applications	\$ 35 - 1,100	\$ 521
Systems	100 - 2,772	1,025
Total	\$ 35 - 2,772	\$ 754

EXHIBIT IV-3

RESPONDENT USERS'  
INFORMATION SERVICES EXPENDITURES

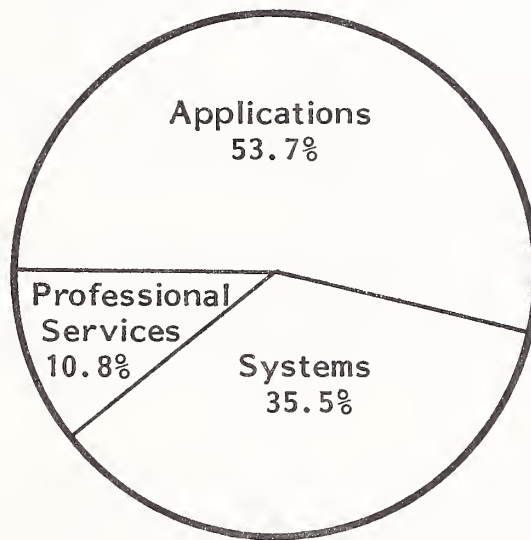
TYPE OF USER	NUMBER OF COMPANIES	EXPENDITURES (\$ Millions)	
		RANGE	AVERAGE
Applications	7	\$0.8 - 16	\$5.1
Software	9	0.3 - 20	4.8
Total	16	\$0.3 - 20	4.9



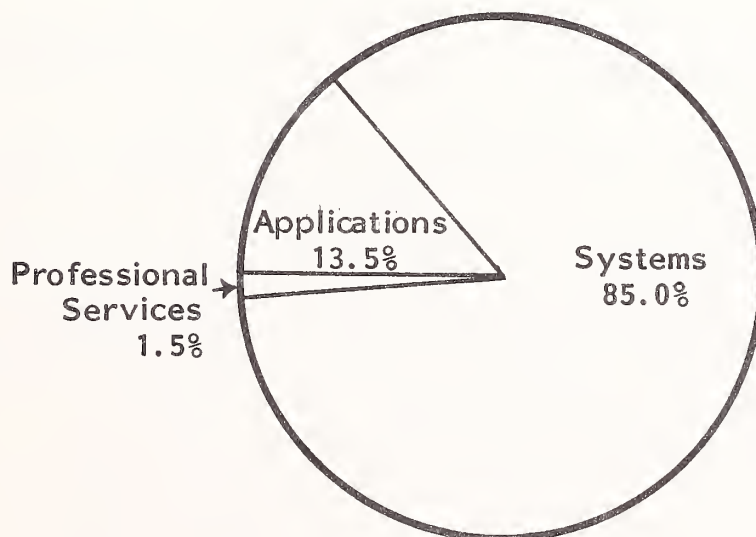
# EXHIBIT IV-4

## PRINCIPAL MODES OF INFORMATION SERVICES EXPENDITURES BY RESPONDENT USERS

### Applications Software Users



### Systems Software Users



other hand, allotted almost 35% of their expenditures to systems software and approximately 54% to applications software.

- Expenditures for software products averaged over \$433,000 for those classified as major applications software users and nearly \$800,000 for the systems software users, as shown in Exhibit IV-5.
- A closer examination, as shown in Exhibit IV-6, indicates that the type of product or service purchased with these expenditures was nearly all packaged software. The only other purchase of any size, according to the respondents, was for maintenance, which averaged just over 12% of expenditures.
- The most important software products purchased by these users since January, 1982, are listed in Exhibit IV-7. The price and terms of sale are also indicated.
- In general, users gave a high overall rating to the important software products they listed. Some of the comments were:
  - "Excellent price. Was installed faster than in-house team could have done."
  - "Met 98% of present and future needs - very flexible."
  - "Users are using it" (because of a lot of support from the vendor).
  - "Easy to use. Users are willing to learn more about it."
  - "Does what I was told it would do."

## EXHIBIT IV-5

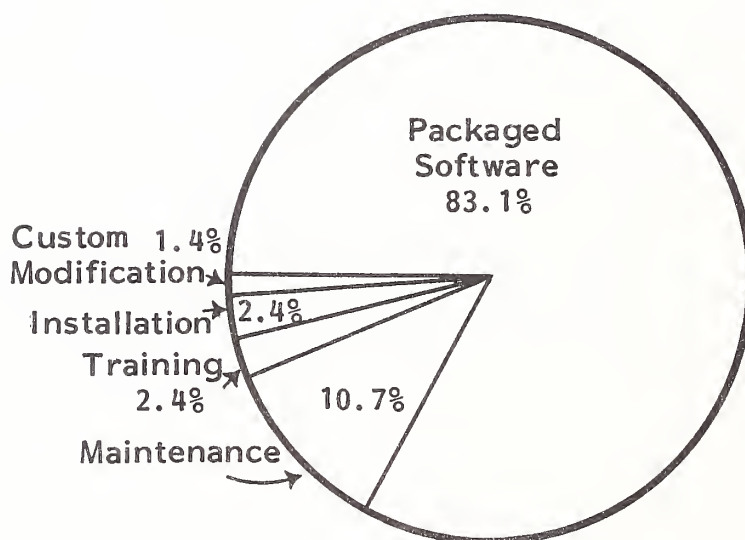
USER RESPONDENTS' ANNUAL  
EXPENDITURES ON SOFTWARE PRODUCTS

TYPE OF PRODUCT	AVERAGE ANNUAL EXPENDITURES (\$ Thousands)	
	APPLICATIONS SOFTWARE USER	SYSTEMS SOFTWARE USER
Applications	\$242	\$328
Systems	191	460
Total	\$433	\$788

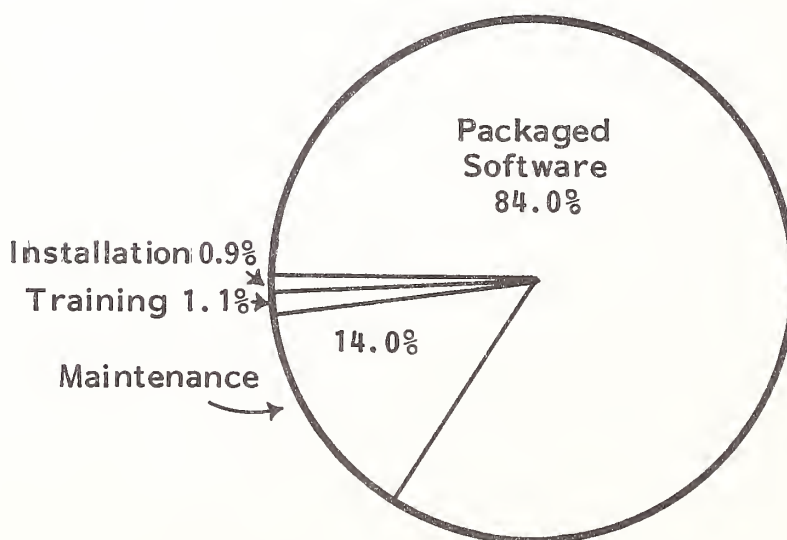
## EXHIBIT IV-6

### TYPE OF INFORMATION SERVICES EXPENDITURES BY SOFTWARE USERS

#### Applications Software



#### Systems Software



## EXHIBIT IV-7

## MOST IMPORTANT APPLICATIONS SOFTWARE PRODUCT

USER	APPLICATION	EXPENDITURE (\$ thousands)	PURCHASE OR LEASE
<b>Systems Software</b>			
User A	Systems Control	\$21.0	Lease
B	Data Security	60.0	Purchase
C	Data Analysis	20.0	Purchase
D	Operating System	15.6	Lease
E	Operating System (Update)	40.0	Lease
F	Operating System (Update)	1.0	Lease
G	Tape Management	19.0	Purchase
H	Operating System	36.0	Lease
I	Memory Management	21.6	Lease
J	Data Management	14.4	Lease
K	Operating System	24.0	Lease
L	N/A	84.0	Lease
<b>Applications Software</b>			
User A	Accounting	150.0	N/A
B	Insurance Administration	100.0	Purchase
C	Accounting	86.0	Purchase
D	Accounting	130.0	Purchase
E	N/A	0.5	Purchase
F	Order Entry/Processing	20.0	Purchase
G	Spreadsheet	10.0	Purchase
H	Medical Claims	95.0	Purchase
I	Word Processing	65.0	Purchase
J	Query Language	70.0	Purchase
K	Accounting	140.0	N/A



- "Keeps the system performing and extends the life of the hardware."
  - "High quality."
- However, two of the twenty-three respondents gave very low ratings to the product listed. One charged that the product didn't really have all the features they wanted while the other remarked that the vendor made minor changes in the system and charged an additional \$40,000. A note should also be made of the comment of one respondent who gave a moderately good rating to the software product in question but added that it was the only ball game in town.

## B. PURCHASE PRACTICES

- Much of the applications software purchased by these users is acquired on a lump sum purchase basis. Systems software, on the other hand, is most frequently obtained under an annual license or fee or, less frequently, purchased, as shown in Exhibit IV-8. Given the nature of the two types of products, this does not seem to be an unusual situation.
- What may be a little unusual, however, is that only 24% of the users were able to indicate when the software vendor had last changed the price of the software and how much of a change it was. The four users who did remember recalled at least one change within the last one-half to two years and an average price increase of 9.5%.

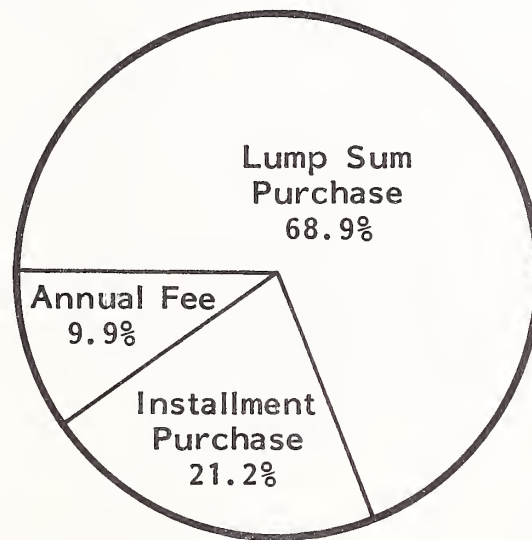
## I. MAINTENANCE

- Exhibit IV-9 indicates software maintenance expense as a percent of expenditures. In general, the reported maintenance ranges from 0-25% with an average of approximately 10%.

EXHIBIT IV-8

ACQUISITION METHODS USED BY RESPONDENTS

Applications Software Users



Systems Software Users

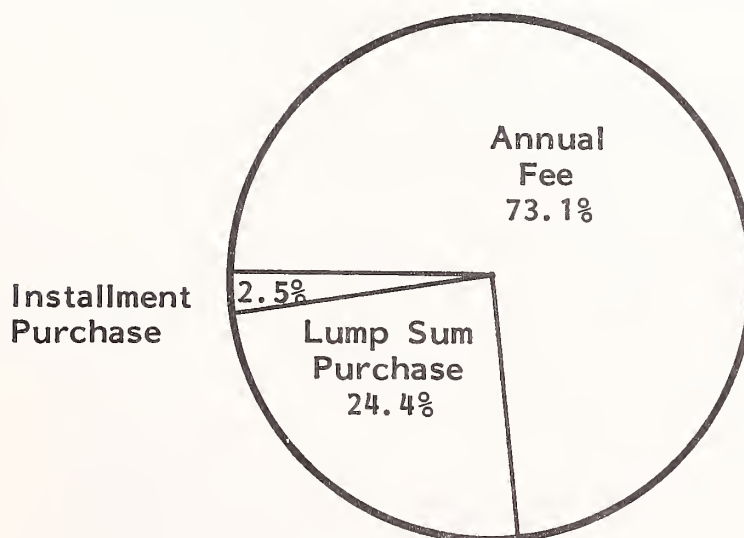


EXHIBIT IV-9

USERS' ANNUAL SOFTWARE MAINTENANCE EXPENSE  
AS A PERCENT OF SOFTWARE EXPENDITURE

TYPE OF USER	ANNUAL MAINTENANCE	
	RANGE (Percent)	AVERAGE (Percent)
Systems	0 - 25%	11.7%
Applications	0 - 20	8.8
Total	0 - 25%	9.6%

- While 42% of the systems software users indicated that maintenance was bundled with the software in one price, none of the applications software users indicated participation in such a package price.
- Applications software users who pay for maintenance are generally satisfied with the value they are getting from the fee. Valuable though it may be, only one user was willing to pay an additional fee (up to 25% more) for excellent service. Some indicated that they would move the maintenance function in-house because of the expense, while others cautioned that "it's cheaper to pay the fee than to have to worry about doing it yourself."
- Systems software users, who frequently get free maintenance with the purchase of a bundled package, said this maintenance was only of average value. Only one user was willing to pay more for excellent service.

## 2. PERSONAL COMPUTERS

- Over half of the users indicated that their vendors offer personal computer versions of mainframe software. These packages range from accounts receivable to financial analyzers and spreadsheets.
- Pricing of personal computer software included a wide variety of practices and a few discounts.
- One-tenth of mainframe price for unlimited copies at one site.
- Sold per copy.
- First copy free with mainframe software.

- Per site fee with a volume discount.
- Thirty-five percent discount on 150 copies.

### C. PRICE PERCEPTIONS AND DISCOUNTS

- When asked to provide their perception of the direction and amount of software price changes prior to and during 1983, the software users estimated a pre-1983 increase of 14.9% in prices and an 8% increase in 1983. While applications software users indicated lower perceived price increases (in the 4% range), systems software users responded with much larger perceived increases of 20% and 10.3% for the two periods respectively. These price change perceptions are presented in Exhibit IV-10.
- When asked what price changes they expected beyond 1983, most users indicated annual price increases in the 6-8% range, as shown in Exhibit IV-11.
- Although some users think that they receive the brunt of large software price increases, few believe the increases are at a level where they would seriously affect any purchase decision. In fact, only 17% of the respondents said price increases would affect future decisions. Alternatives being considered by these users include:
  - A decision to purchase packages for cross-industry applications and to develop vertical applications in-house.
  - A plan to do more maintenance in-house.
  - A determination to shop around.



# EXHIBIT IV-10

## USERS' PERCEPTIONS OF VENDORS' SOFTWARE PRICE INCREASES

TYPE OF USER	PERCEIVED INCREASES			
	PRE-1983		1983	
	RANGE	AVERAGE	RANGE	AVERAGE
Applications	-7.5 - 11 %	5.9%	-125 - 11%	3.5%
Systems	5.0 - 100	24.0	0 - 25	8.9

# EXHIBIT IV-11

## SOFTWARE PRODUCTS PRICE CHANGES EXPECTED BY USER RESPONDENTS

TYPE OF USER	EXPECTED PRICE CHANGES	
	RANGE	AVERAGE
Applications		
1983	N/A	N/A
1984	-2.5 - 12.5%	6.4%
1985	-2.5 - 12.5	6.8
Systems		
1983	0.0 - 8.5	2.7
1984	0.0 - 20.0	8.6
1985	0.0 - 15.0	7.4

- All methods of discounting were experienced by these users although the most frequent methods were discounts for additional CPUs, additional sites, or volume. The range and average discounted amounts for each of these methods is presented in Exhibit IV-12.

#### D. SOFTWARE USERS' RATINGS OF SELECTED FACTORS

- The software products users who responded to this study generally attributed a high degree of importance to each factor in the software decision process.
- Rating these factors on a scale from 1 (low importance) to 5 (high importance) revealed the top ten factors in Exhibit IV-13.
- While the average rating resulted in the order listed, software users, when asked to identify the most important factor, generally selected software features and functionality. Some of their comments for selecting this factor are listed below:
  - "Must be easy to install, flexible, and user-friendly."
  - "Must do what it is supposed to do."
  - "Must integrate with existing systems to maintain the longevity of the hardware."
  - "Must start quickly and easily."

## EXHIBIT IV-12

METHOD AND AMOUNT OF DISCOUNTS  
RECEIVED BY SOFTWARE PRODUCTS USERS

DISCOUNT PRACTICE	PERCENT OF RESPONDENTS RECEIVING DISCOUNT	DISCOUNT AMOUNT			
		MINIMUM		MAXIMUM	
		RANGE	AVERAGE	RANGE	AVERAGE
Additional Sites	23%	5-20%	13.0%	15-40%	27.0%
Volume	23	5-15	10.0	10-45	26.0
Additional CPUs	32	5-40	19.8	15-60	39.8
Additional Products	36	5-40	17.5	5-40	22.5



## EXHIBIT IV-13

**USERS' RATINGS OF THE MOST IMPORTANT FACTORS  
CONSIDERED IN BUYING SOFTWARE**

RANK	USERS' BUYING DECISION FACTORS	RATING OF IMPORTANCE (1 to 5) *		
		ALL USERS	SYSTEMS SOFTWARE	APPLICATIONS SOFTWARE
1	Ease of Use	4.8	4.6	4.7
2	Software Performance	4.6	4.5	4.5
3	Customer Support	4.6	4.5	4.6
4	Vendors' Commitment to Maintain Product	4.6	4.7	4.3
5	Documentation	4.5	4.3	4.5
6	Software Features and Functionality	4.5	4.3	4.6
7	Software Flexibility	4.3	4.0	4.6
8	Ease of Implementation	4.3	4.2	4.1
9	Service Quality	4.3	3.0	4.2
10	Vendors' Reputation	4.1	4.1	4.0
11	Training	4.0	4.1	3.9
12	Vendors' Application Knowledge	3.8	4.0	3.8
13	Vendors' Financial Stability	3.8	3.5	4.0
14	Product Family	3.4	3.1	3.6
15	Product Price	3.4	3.3	3.2
16	Vendors' Industry Knowledge	2.5	2.4	2.9
17	Vendors' Administration (Billing, etc.)	2.5	2.4	2.4

\* Rating: 1 = Low, 5 = High





V PROFESSIONAL SERVICES VENDORS' PRICING  
PRACTICES AND ATTITUDES



## V PROFESSIONAL SERVICES VENDORS' PRICING PRACTICES AND ATTITUDES

### A. VENDOR PROFILE

- The companies included in the research are representative of the professional services industry at large: ranging from the medium-size (\$14 million in revenue) to among the largest professional services vendors (\$600 million), as shown in Exhibit V-1.
- Principal types of revenue for these vendors, as shown in Exhibit V-2, included all modes of information services but, by definition, they derived the majority of their revenue from professional services. Commercial professional services vendors did indicate that approximately 20% of the company's 1982 revenue was derived from other services, including processing services and integrated systems. Vendors to government revealed that their proportion of other services was 38% of company revenue.
- The professional services revenue for vendors to the government sectors included 25% from commercial professional services users. Commercial professional services vendors, however, had very little revenue from vending professional services to government, as shown in Exhibit V-3.

EXHIBIT V-1

RESPONDENT VENDOR REVENUE -  
PROFESSIONAL SERVICES

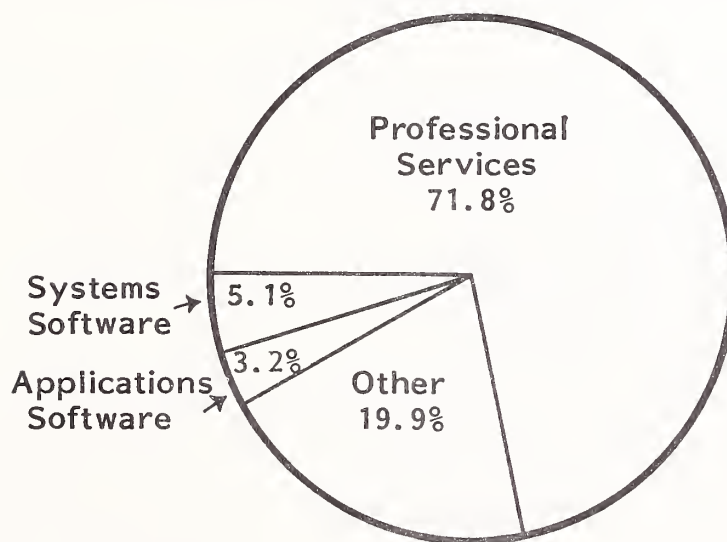
TYPE OF COMPANY	NUMBER OF COMPANIES	REVENUE (\$ Millions)	
		RANGE	AVERAGE
Government	6	\$33 - 172	\$ 73.67
Commercial	7	14 - 600	116.04
Total	13	\$14 - 600	\$ 96.48



EXHIBIT V-2

PRINCIPAL MODES OF SERVICE OF  
RESPONDENT PROFESSIONAL SERVICES VENDORS

Commercial Professional Services



Government Professional Services

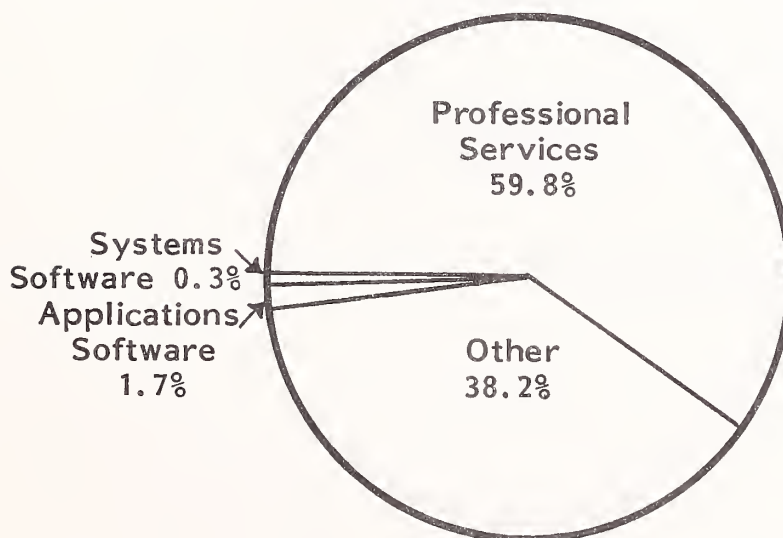
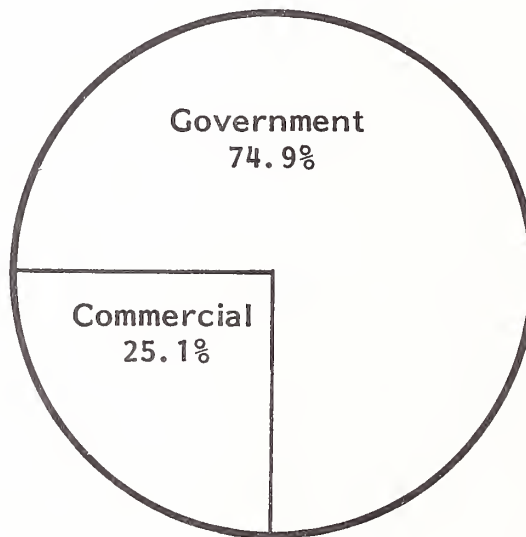


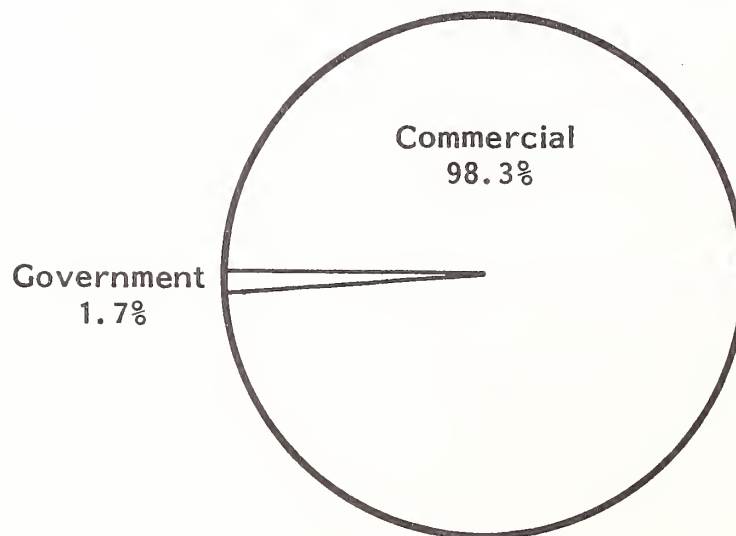
EXHIBIT V-3

REVENUE SOURCES OF  
RESPONDENT PROFESSIONAL SERVICES VENDORS

Government Vendors



Commercial Vendors



- Vendors indicated that revenue increases had been favorable during the 1980-1982 period and were likely to stay favorable in the 1983-1984 period, as shown in Exhibit V-4.
  - For the professional services vendors to government, the average revenue increase for the two-year period between 1980 and 1982 was 21%. Professional services vendors to commercial users indicated a 40% increase in company revenue for the same period.
  - For the coming two-year period, 1983-1984, professional services vendors to government are anticipating a 24% average annual increase in the rate of revenue growth. Commercial professional services vendors, on the other hand, are predicting a drop to an average company revenue increase of 25%.
- Most of these same vendors, while reluctant to discuss profit margins, indicated that they improved their pretax margins last year. Only 10% of the responding vendors indicated a decline in profit margins. When asked how their margins compared to the industry as a whole, three vendors placed their company's margins above the average, five placed theirs below the industry, and one vendor placed company revenue growth on a par with the industry.
  - Actual pretax margins for the years 1980, 1981, and 1982 for the respondents who provided data are presented in Exhibit V-5. Combined, the companies included in the survey had an average 9-13% increase in margins each year during this period, as shown in Exhibit V-6.

EXHIBIT V-4

AVERAGE REVENUE INCREASE BY  
RESPONDENT PROFESSIONAL SERVICES VENDORS

TARGET MARKET	PERCENT INCREASE IN REVENUE			
	1980 - 1982		1983 - 1984	
	RANGE	AVERAGE	RANGE	AVERAGE
Government	10 - 33%	20.8%	10 - 33%	23.6%
Commercial	26 - 63	39.5	5 - 35	24.7
Total	10 - 63%	31.7%	5 - 35%	24.2%

EXHIBIT V-5

PRETAX PROFIT MARGINS  
OF RESPONDENT PROFESSIONAL SERVICES VENDORS

YEAR	VENDOR PRETAX PROFIT MARGINS	
	RANGE	AVERAGE
TOTAL		
1980	7-23.0%	13.4%
1981	5.5-15.8	9.8
1982	5-15.5	9.2



# EXHIBIT V-6

## REVENUE CHANGE ATTRIBUTABLE TO PRICE INCREASES BY RESPONDENT PROFESSIONAL SERVICES VENDORS

TYPE OF COMPANY	REVENUE CHANGE		
	AVERAGE	ATTRIBUTABLE TO PRICE INCREASES	
		RANGE	AVERAGE
<b>Government</b>			
1980 - 1982	20.8%	3 - 75%	26.1%
1983 - 1984	23.6	3 - 33	15.6
<b>Commercial</b>			
1980 - 1982	39.5	3 - 50	17.3
1983 - 1984	24.7	6 - 10	8.7
<b>Total</b>			
1980 - 1982	31.7%	3 - 75%	21.7%
1983 - 1984	24.4%	3 - 33%	12.6%

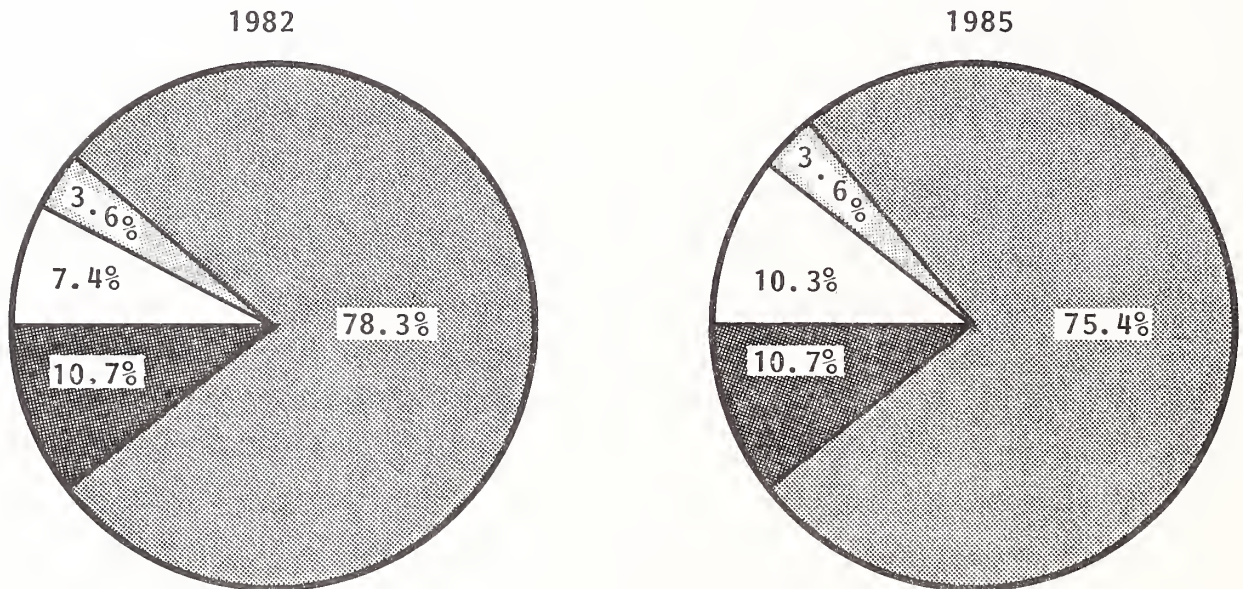
## B. PRICING CHANGES AND INNOVATIONS

- Unlike the software products vendors, respondent professional services vendors acknowledge a significant contribution to company revenue due to pricing. In fact, more than 21% of the revenue increases cited above were attributed to pricing during the period 1980-1982, as shown in Exhibit V-7. Many vendors reported that pricing changes will be a significant factor in 1983-1984.
- Most commercial professional services vendors price on a time-and-materials basis although different methods - fixed price, cost plus, and "other" - are used, as shown in Exhibit V-7. However, vendors to government price (in order of frequency) according to cost plus, fixed price, and time-and-materials methods. Frequency of use of these various methods is not expected to change through 1985.
- Vendors are apparently satisfied, as only one vendor had changed methods recently. There will be a shift for government sector oriented vendors of professional services from a time-and-materials basis to cost plus as the government changes its method of contracting business.
- According to the respondents, incentives are a frequent part of the professional services vendors' revenue. Five of the vendors to government and three of those to commercial users indicated that incentives are frequently a part of the professional services contract. One vendor to the government indicated that a quality product delivered on time received up to a 30% incentive. Another government professional services vendor described an incentive plan based on avoiding cost overrun - if the project is completed under budget the vendor shares in the difference between budget and actual; but is paid less than originally bid if costs are over budget.

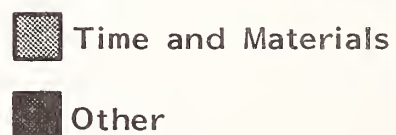
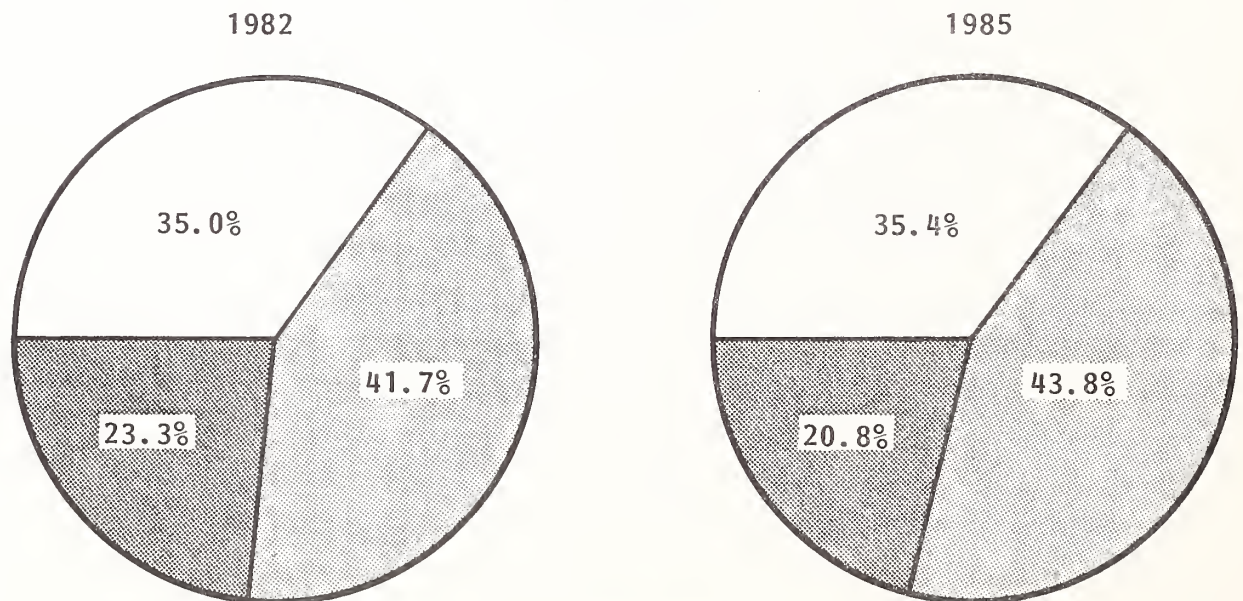
EXHIBIT V-7

PRICING TECHNIQUES OF PROFESSIONAL SERVICES VENDORS

Commercial



Government





- Hourly rates for professional services analysts and programmers are presented in Exhibit V-8. The exhibit indicates that, while the rates vary from a low of \$20 per hour to a high of \$125 per hour, the average rate is approximately \$46-\$73 for analysts and \$54-\$84 for programmers.

### C. VENDOR PERCEPTIONS OF USER ATTITUDES

- On average, professional services vendors believe that customers expect professional services prices to increase only modestly in the 1983-1985 period; a 3.1% increase in 1983, a 4.8% increase in 1984, and a 6.2% increase in 1985, as shown in Exhibit V-9. Although there was little difference between professional services vendors to government and commercial users, there were more commercial vendors who felt customers would expect no increases in 1983-1985. Again, like the software products vendors, the indication is that vendors believe customers have a tendency to expect smaller increases than they are actually likely to receive.
- Exhibit V-10 depicts the ratings of professional services vendors to ten items that influence the buying decision. Vendors were asked to rate the importance of each factor to their customers on a scale from 1 (low) to 5 (high).
- Commenting on why they thought vendors' application knowledge was most important, vendors pointed out that the marketplace is very competitive and that getting business depends very much on the client's perceptions of the vendor's track record.
- User responses to the same set of factors are presented in the following chapter in Exhibit VI-5.

# EXHIBIT V-8

## PROFESSIONAL SERVICES VENDORS' PUBLISHED HOURLY RATES FOR ANALYSTS AND PROGRAMMERS

TYPE OF RATE	HOURLY RATES				
	GOVERNMENT		COMMERCIAL		TOTAL AVERAGE
	RANGE	AVERAGE	RANGE	AVERAGE	
Analyst					
Minimum	\$20.00 - 62.50	\$54.00	\$30.00 - 55.00	\$41.07	\$45.77
Maximum	50.00 - 100.00	83.75	30.00 - 90.00	67.14	\$73.18
Programmer					
Minimum	20.00 - 20.00	46.25	25.00 - 100.00	54.00	\$51.18
Maximum	36.00 - 125.00	67.75	50.00 - 125.00	84.29	\$78.27
Total	\$20.00 - 125.00	\$62.94	\$30.00 - 125.00	\$61.63	\$62.10



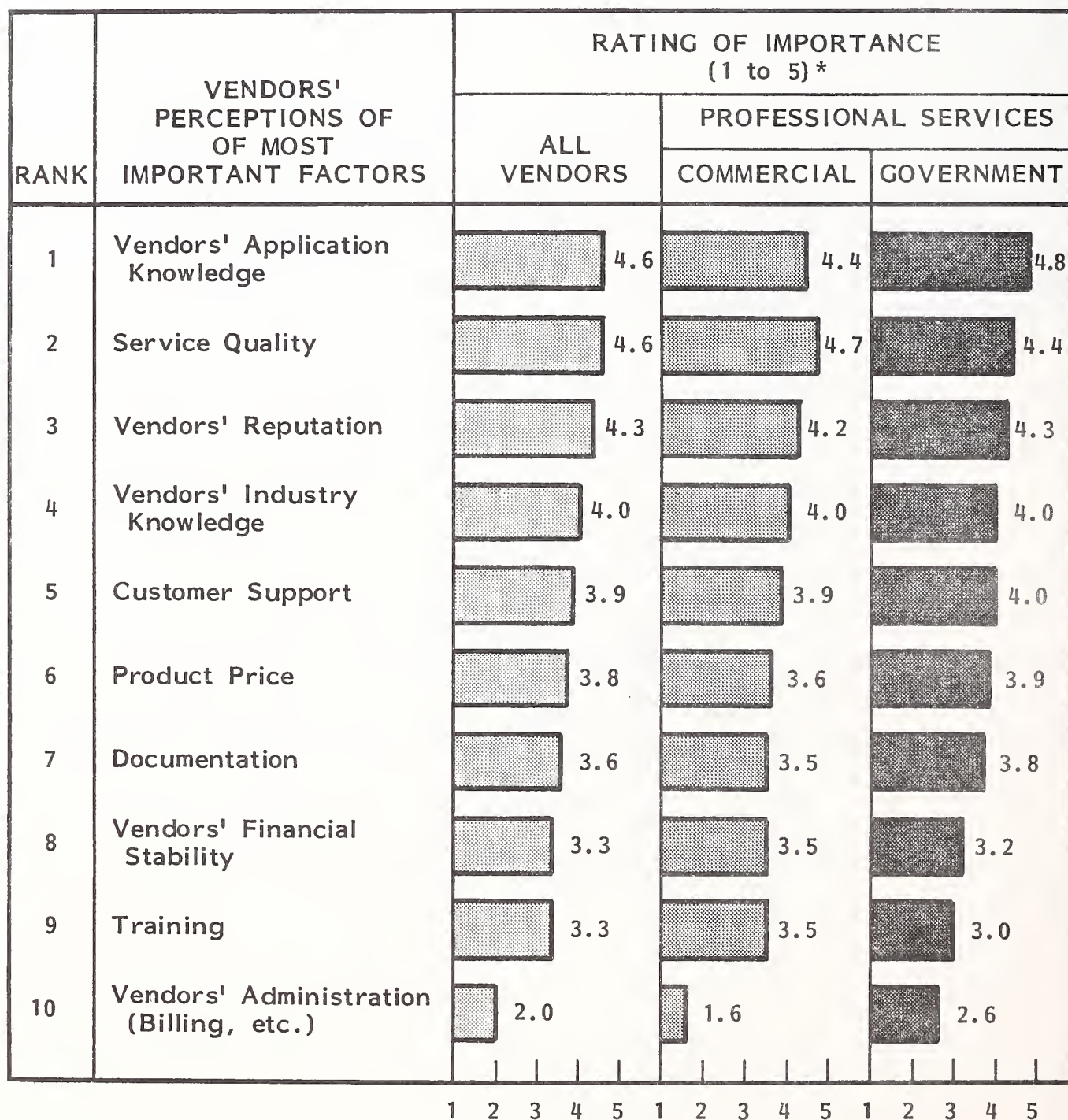
# EXHIBIT V-9

## PROFESSIONAL SERVICES VENDORS' PERCEPTIONS OF CUSTOMERS' EXPECTED PRICE CHANGES

TYPE OF COMPANY/ TARGET YEAR	PERCEPTION OF CUSTOMERS' EXPECTED PRICE CHANGES	
	RANGE	AVERAGE
<b>Government</b>		
1983	0.0 - 6.0%	3.2%
1984	3.5 - 9.0	6.2
1985	3.5 - 9.0	6.2
<b>Commercial</b>		
1983	0.0 - 7.5	3.1
1984	0.0 - 7.5	3.8
1985	5.0 - 7.5	6.3
<b>Total</b>		
1983	0.0 - 7.5%	3.1%
1984	0.0 - 7.5%	4.8%
1985	0.0 - 7.5%	6.2%

# EXHIBIT V-10

## RESPONDENT VENDORS' RATINGS OF THE MOST IMPORTANT FACTORS CONSIDERED BY CUSTOMERS IN SELECTING PROFESSIONAL SERVICES



\* Rating: 1 = Low, 5 = High

## VI PROFESSIONAL SERVICES USER PROFILE



## **VI PROFESSIONAL SERVICES USER PROFILE**

### **A. PROFESSIONAL SERVICES USER PROFILE**

- The professional services users interviewed in this study were either vice-presidents or directors of corporate management information systems.
- The respondent companies involved in this study represented typical professional services users in four different industries and three federal government agencies, as shown in Exhibit VI-1.
- Commercial user respondents indicated that company sales ranged from \$1.4 billion to over \$4.6 billion. Professional services expenditures by these users averaged nearly \$500,000. These expenditures were divided among professional services, applications software, and systems software (as well as other information services not included in this study), as depicted in Exhibit VI-2.

### **B. PURCHASE PRACTICES AND PRICE PERCEPTIONS**

- On average, all methods of purchase of professional services are used by these respondents, as shown in Exhibit VI-3. Most respondents do have, however, a most frequently used method. Time and materials is used most often, followed by cost plus, and then fixed price.



# EXHIBIT VI-1

## RESPONDENT USER SALES - PROFESSIONAL SERVICES

TYPE OF USER	NUMBER OF COMPANIES	REVENUE (\$ Millions)	
		RANGE	AVERAGE
Commercial	4*	\$1,400-4,639	\$2,709.75
Government	3	N/A	N/A
Total	7	N/A	N/A

\* One commercial user of professional services did not supply company sales data.

EXHIBIT VI-2

PRINCIPAL MODES OF INFORMATION SERVICES EXPENDITURES  
BY RESPONDENT USER GROUPS

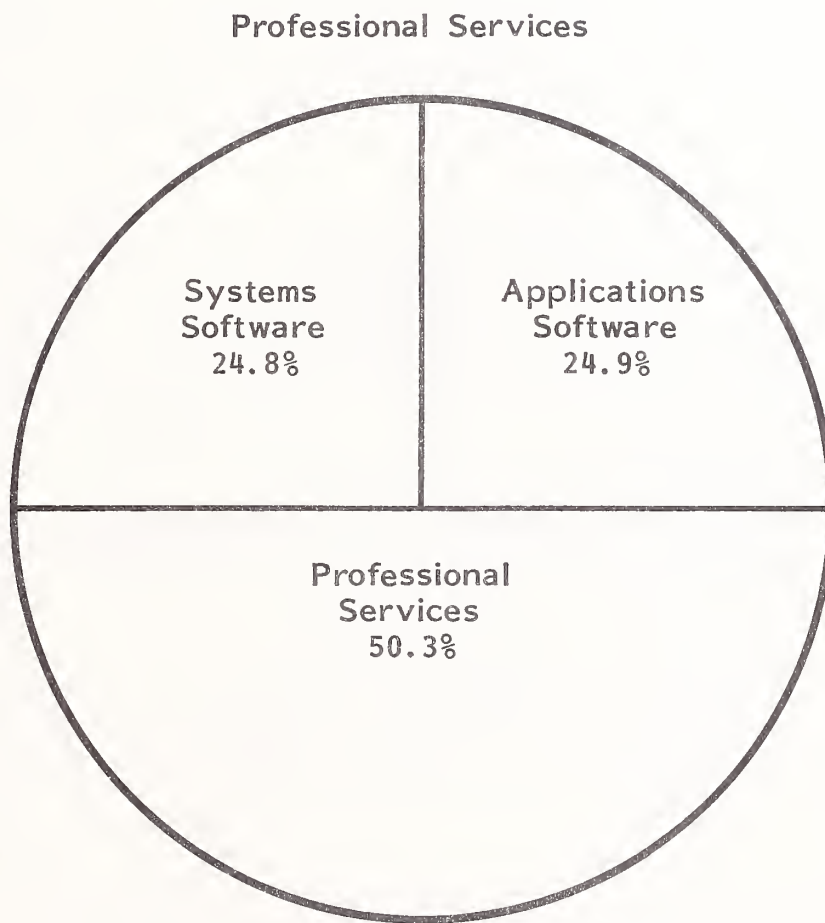
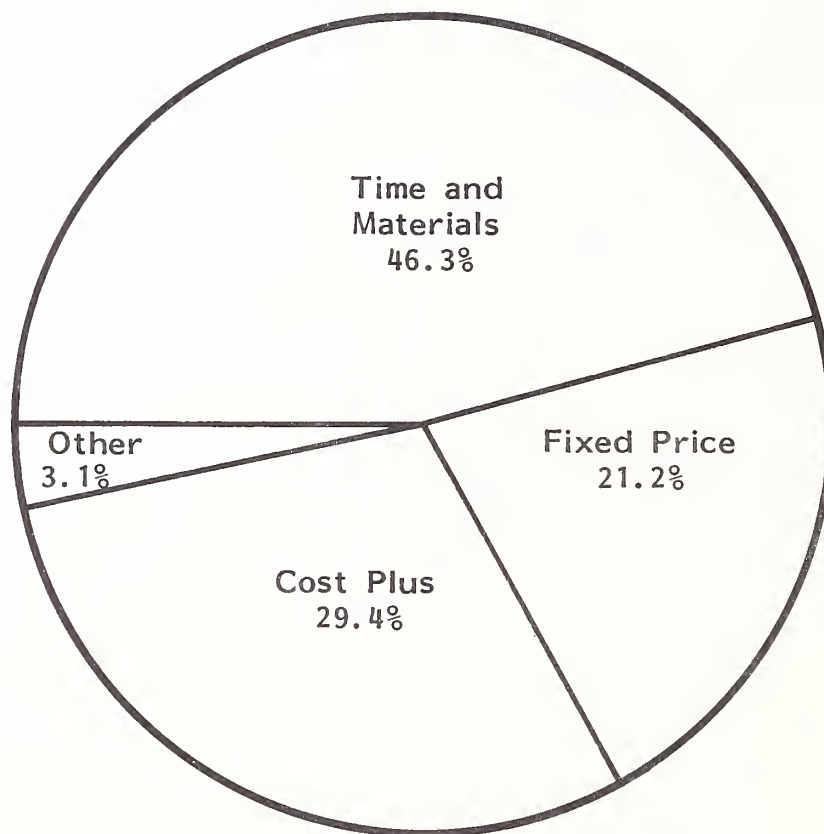


EXHIBIT VI-3

METHODS OF PURCHASE OF  
PROFESSIONAL SERVICES USED BY RESPONDENTS



- Users, particularly commercial ones, do have plans to change, or have at least held serious discussions about changing the way their organization uses professional services. Many users expressed serious interest in cutting professional services expenditures by moving the function in-house or by being much more selective of the projects contracted. In all cases these discussions and actions were based on the perceived high expense of professional services.
- To offset the increasing cost of professional services, some users will purchase them only for the most important projects, implementing fewer changes in order to reduce the need.
- When asked what price changes they anticipated, most users indicated that they expect annual price increases in the 0-8% range. Commercial users expect larger increases than do government users. No user, however, expects a decline in the price of service, as shown in Exhibit VI-4.

### C. USERS' RATINGS OF SELECTED FACTORS

- The professional services users who responded to this study generally placed a high degree of importance on each factor in the professional services decision process.
- Rating these factors on a scale from 1 (low importance) to 5 (high importance) revealed the top ten factors listed in Exhibit VI-5.
- Users pointed out that applications knowledge is very important in that the vendor is expected to know the user's system and to solve the user's problems quickly. If the manager of the user group must spend time either learning the system or teaching the system to the vendor, the professional services expense is no longer worth the price.

# EXHIBIT VI-4

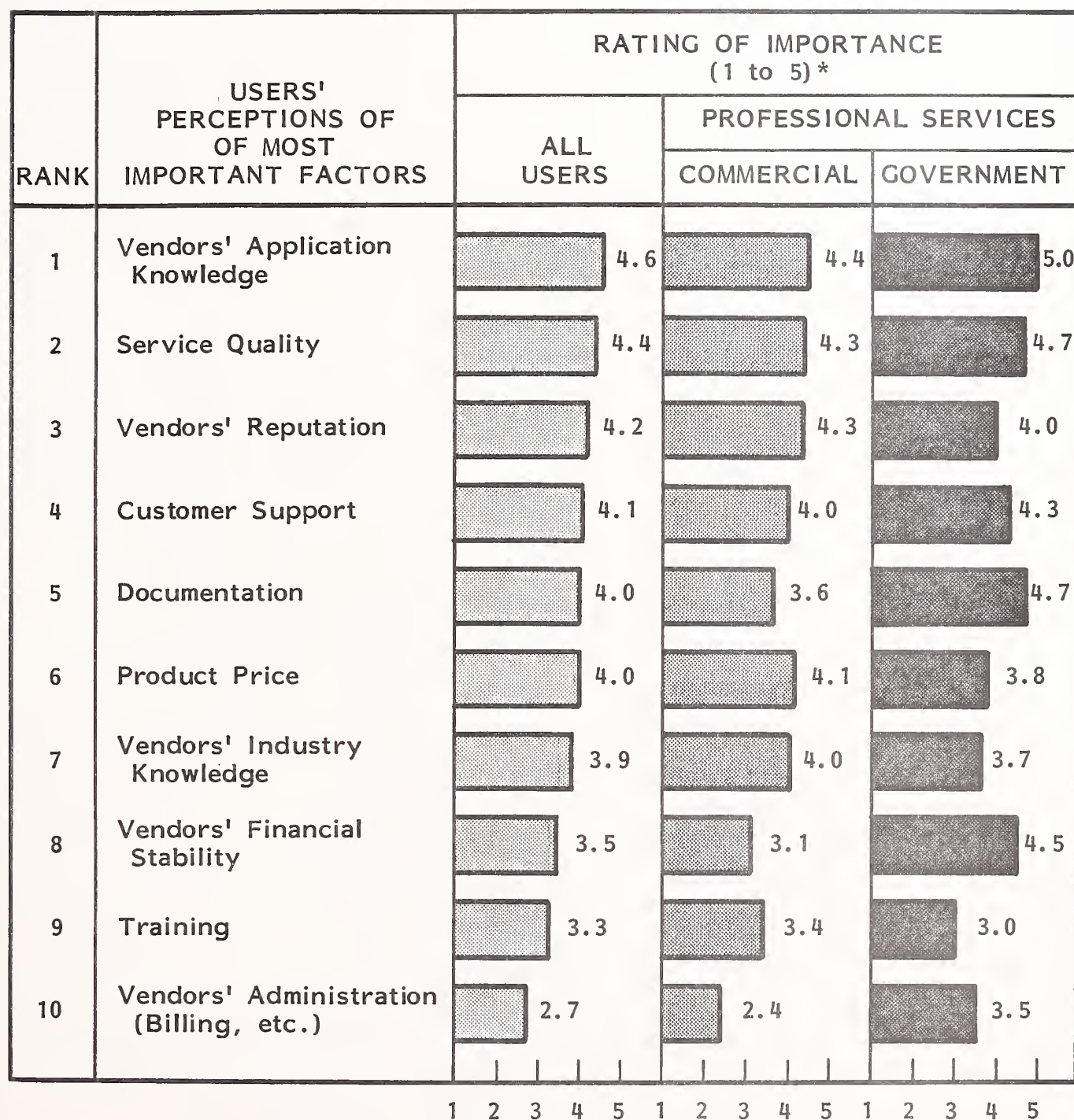
## PROFESSIONAL SERVICES PRICE CHANGES EXPECTED BY USER RESPONDENTS

TYPE OF USER/ TARGET YEAR	EXPECTED PRICE CHANGE	
	RANGE	AVERAGE
<b>Government</b>		
1983	0 - 10.0%	0.0%
1984	0 - 10.0	3.3
1985	0 - 10.0	3.3
<b>Commercial</b>		
1983	0 - 3.0	1.2
1984	0 - 12.5	7.5
1985	0 - 12.5	7.5



# EXHIBIT VI-5

## USERS' RATINGS OF THE MOST IMPORTANT FACTORS CONSIDERED IN BUYING PROFESSIONAL SERVICES



\* Rating: 1 = Low, 5 = High



## VII THE PRICING PROCESS



## VII THE PRICING PROCESS

- As discussed in the previous chapters, software products and professional services vendors are facing many new challenges in the 1980s. Among these challenges is the desire to continue the rapid annual growth of company revenue in the face of an increasingly resistant customer base. In this chapter these two forces are explored.

### A. STRATEGIC OBJECTIVES IN PRICING DECISIONS

- Vendors consider many factors when making pricing decisions. Major considerations include the impact of pricing on meeting strategic objectives and the adequate coverage of cost factors in bringing the product or service to market.

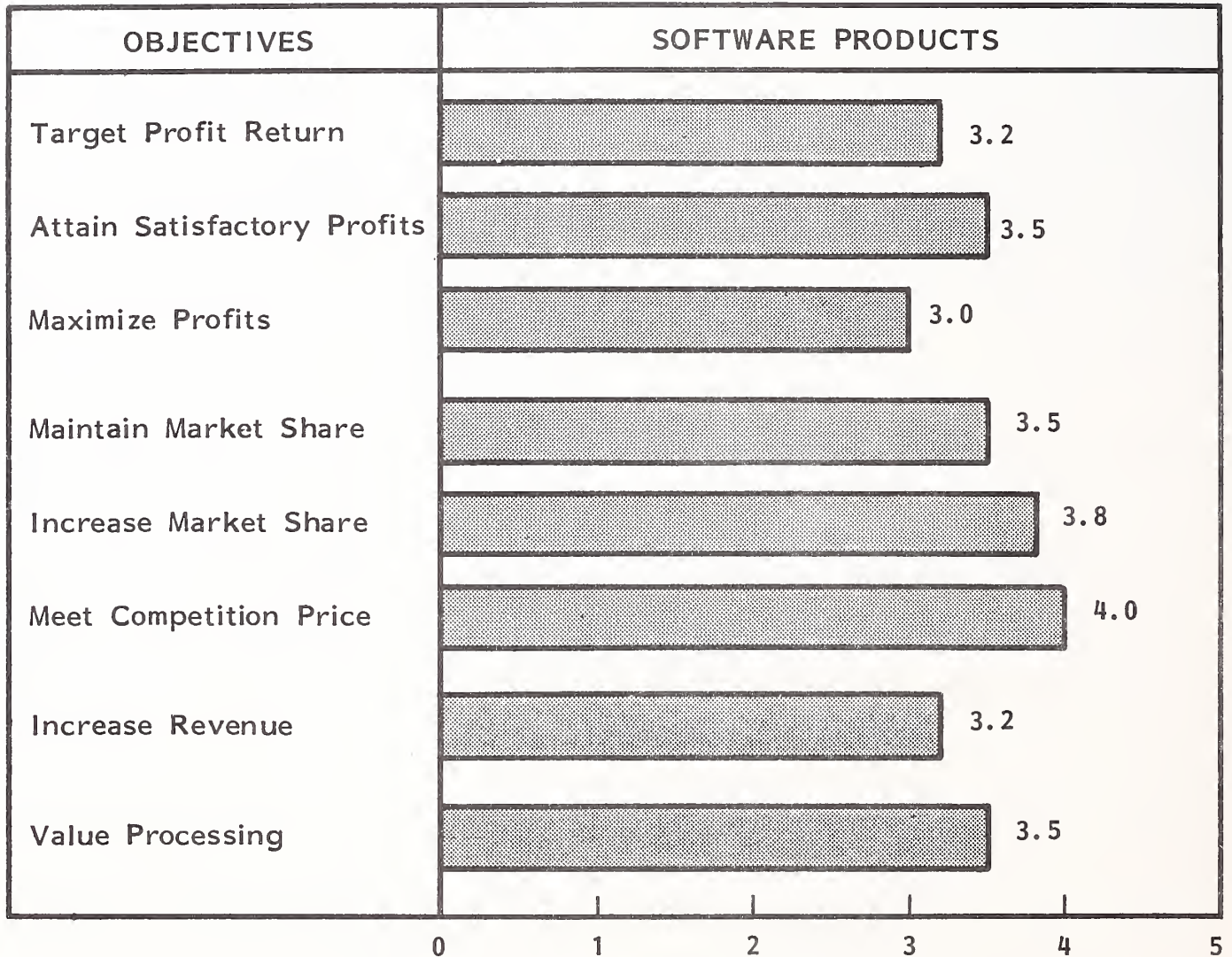
#### I. MEETING STRATEGIC OBJECTIVES

- Software products and professional services vendors rate the importance of various factors in a similar manner, as shown in Exhibits VII-1 and VII-2. Both groups of vendors, for example, feel that pricing to maintain market share is less important than pricing to increase it which is, in turn, dictated by pricing to meet or beat the competition. As the vendors commented throughout the interviewing process, the competition among vendors is fierce and they are very conscious of pricing themselves out of the market.



# EXHIBIT VII-1

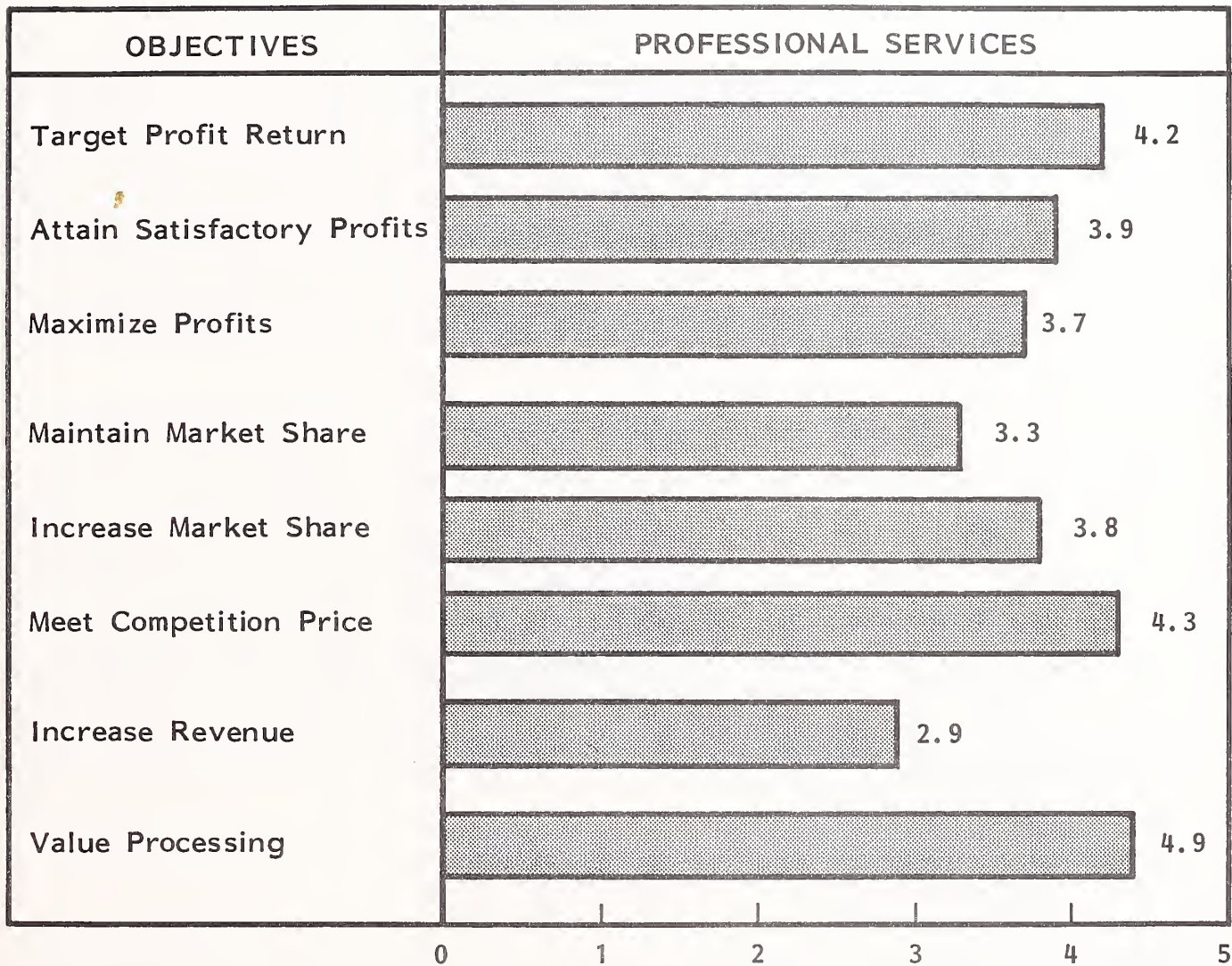
## IMPORTANCE OF VARIOUS OBJECTIVES USED IN PRICING DECISIONS BY SOFTWARE PRODUCTS VENDORS



\* Rating of Importance: 1 = Low, 5 = High

## EXHIBIT VII-2

### IMPORTANCE OF VARIOUS OBJECTIVES USED IN PRICING DECISIONS BY PROFESSIONAL SERVICES VENDORS



\* Rating of Importance: 1 = Low, 5 = High



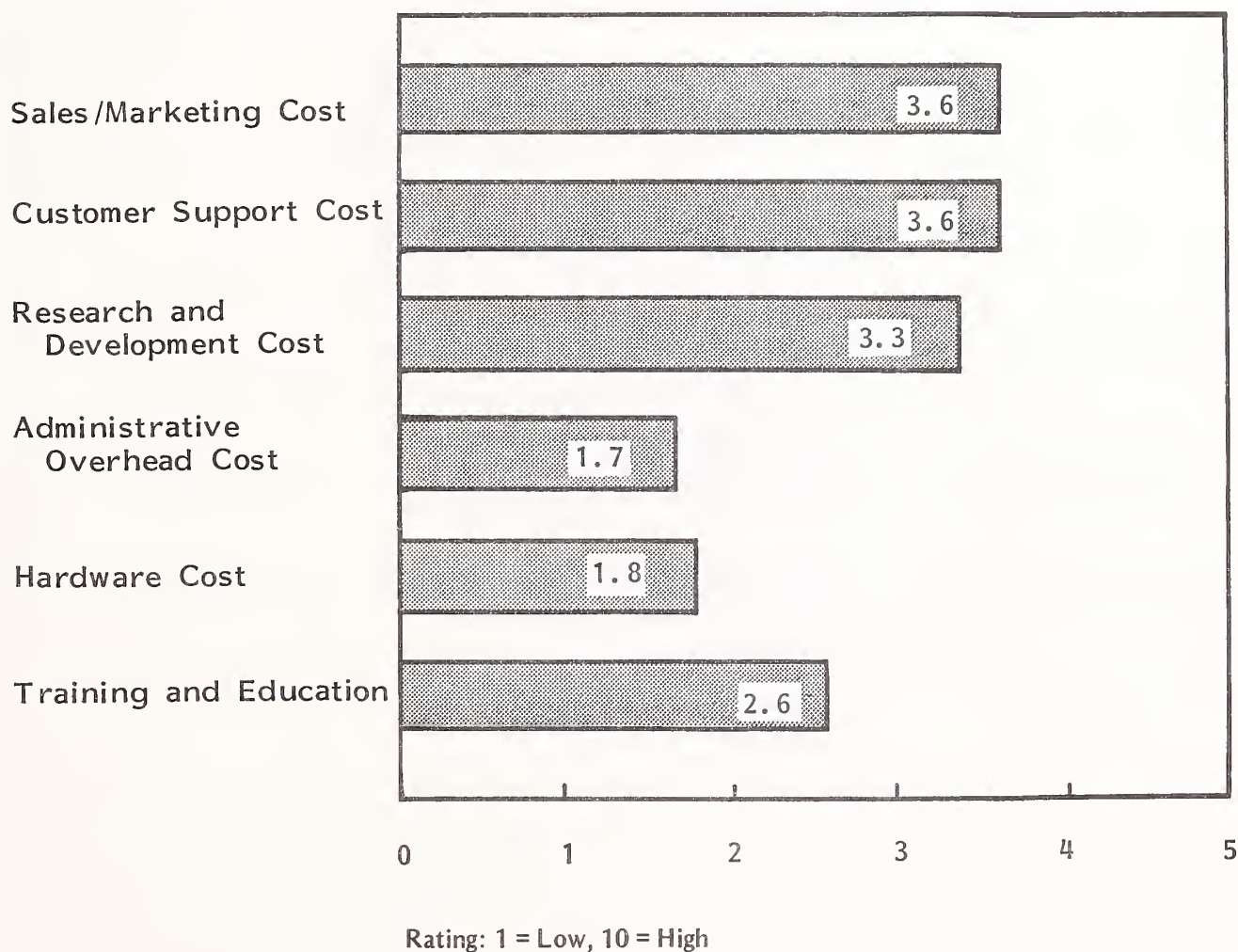
- However, vendors realize that their products or services have a value that customers recognize and for which they are willing to pay. Pricing policies set with a knowledge of this perceived value encourage vendors to maximize their return by giving vendors top dollar for their product/services. This is particularly true for professional services vendors whose value to the customer is recognized by both vendor and customer as one of the most important considerations in the vendor selection process.
- Vendors indicated that price increases accounted for less than 25% of the increase in company revenue. It may be that significant increases in the number of new software unit sales or professional services contracts reduces pressure to boost revenues through price increases. The strategy, then, is to increase prices to the level of their perceived value and to make up any differences in planned revenues with increases in the number of units or contracts sold.
- Profit objectives were slightly more important in the pricing process to professional services vendors (3.7%) than to software products vendors (3.0%). In fact, while professional services vendors rated profit and share objectives nearly equally, software products vendors indicated that they placed slightly more weight on increasing market share (3.8%) than on profit (3.5%). Perhaps this reflects the continuing pressure on software products vendors who must compete with more vendors offering more product capabilities than ever before.

## 2. COST FACTORS

- As shown by Exhibits VII-3 and VII-4 in general, professional services vendors rated the importance to pricing decisions of selected cost factors lower than did software products vendors. Professional services vendors' highest average rating was only 3 on a 1-to-5 scale. Those factors that influence price the most include, in order of importance, sales/marketing costs and customer-support costs.

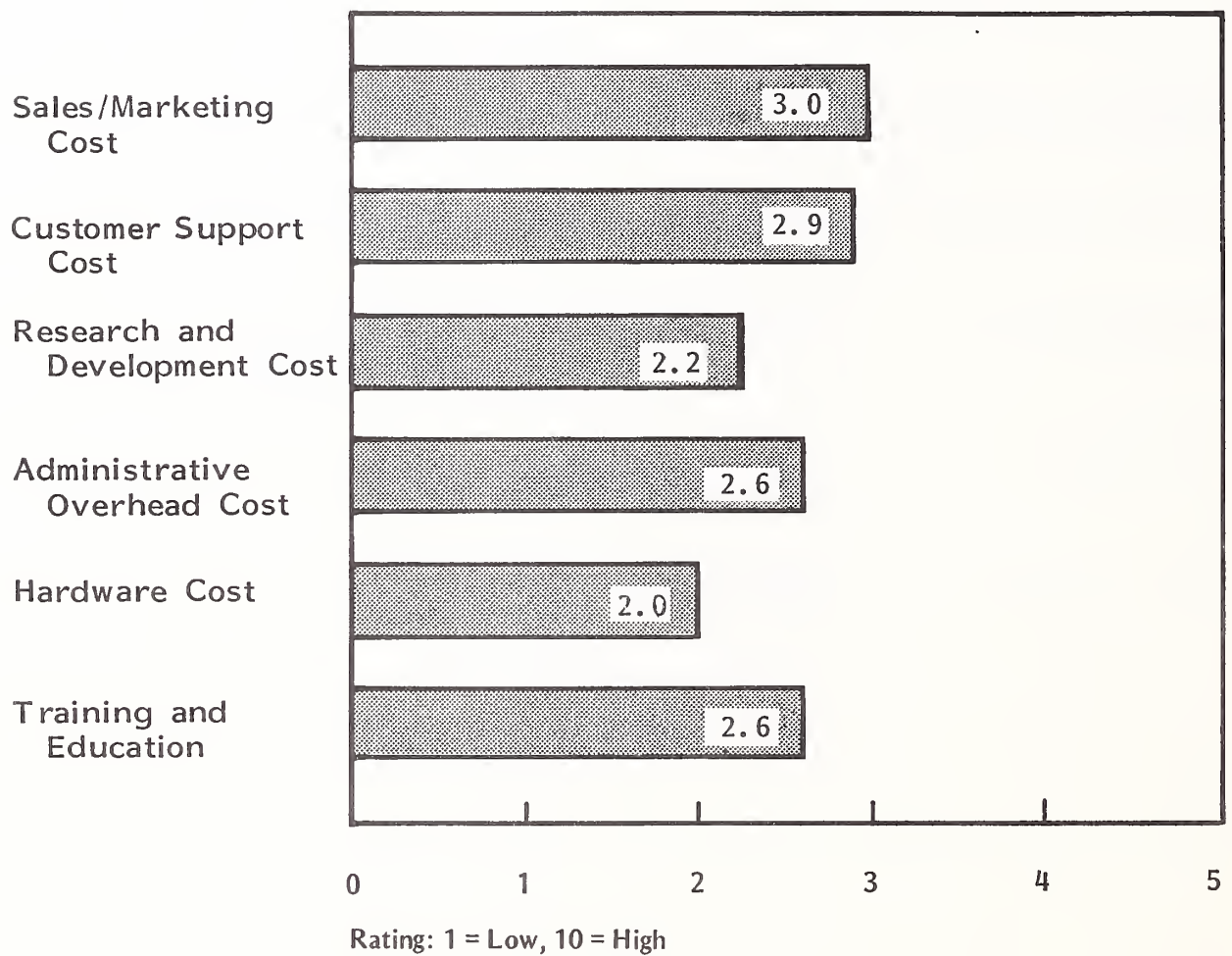
### EXHIBIT VII-3

#### SOFTWARE PRODUCTS VENDORS' RATINGS OF THE IMPORTANCE OF SELECTED COST FACTORS IN DETERMINING PRICING POLICIES



# EXHIBIT VII-4

## PROFESSIONAL SERVICES VENDORS' RATINGS OF THE IMPORTANCE OF SELECTED COST FACTORS IN DETERMINING PRICING POLICIES





- Both groups of vendors rated training and education as important. Software products vendors went on to rank research and development as an important pricing consideration while, as expected, professional services vendors included administrative overhead costs.
- These exhibits indicate that the sales efforts and the after-sales support structure are among the biggest cost considerations in pricing decisions.

## B. KEY FACTORS IN PRICING

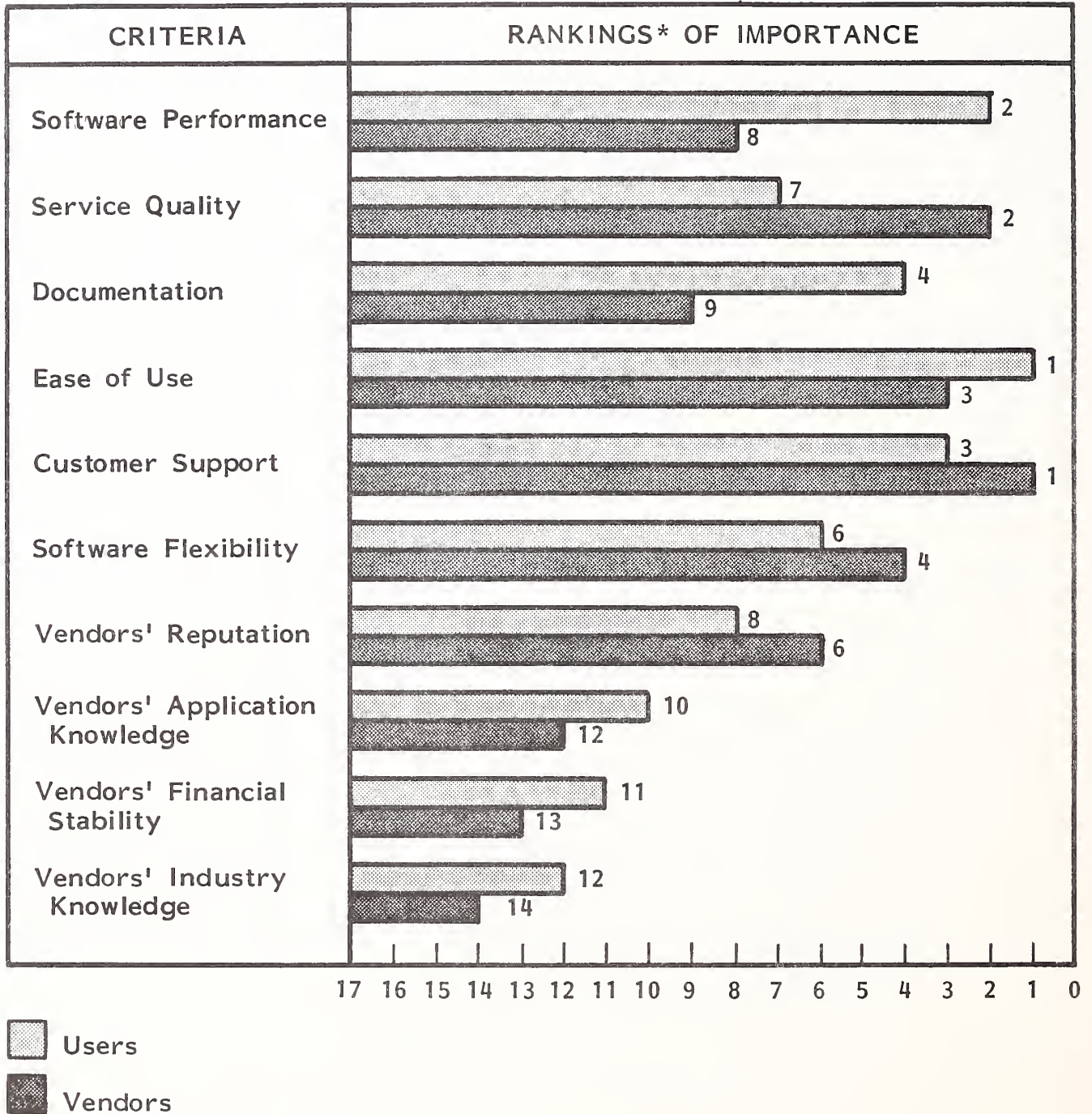
- Among the key factors in pricing decisions are the importance customers give to the characteristics of the vendor or the vendor's product/service and also the price increase expectations of the customer.

### I. KEY SELECTION FACTORS

- Exhibits VII-5 and VII-6 show the similarities and differences between vendors' perceptions of customers' ratings and actual customer ratings of software products and professional services offered.
- Software products vendors' perceptions are wrong in predicting users' ratings in a number of areas. The most glaring discrepancy is that customers felt software performance was a very important consideration (ranked second), but vendors listed it eighth in importance out of 17 factors. Similarly, customers felt service quality was only moderately important (seventh), but vendors listed it second. Documentation, which customers listed as fourth in importance, was listed only ninth by vendors.
- In view of these misperceptions vendors need to make special note of the following:

# EXHIBIT VII-5

## DIFFERENCES BETWEEN VENDORS' PERCEPTIONS AND USERS' ACTUAL RANKINGS OF IMPORTANCE OF SOFTWARE SELECTION CRITERIA

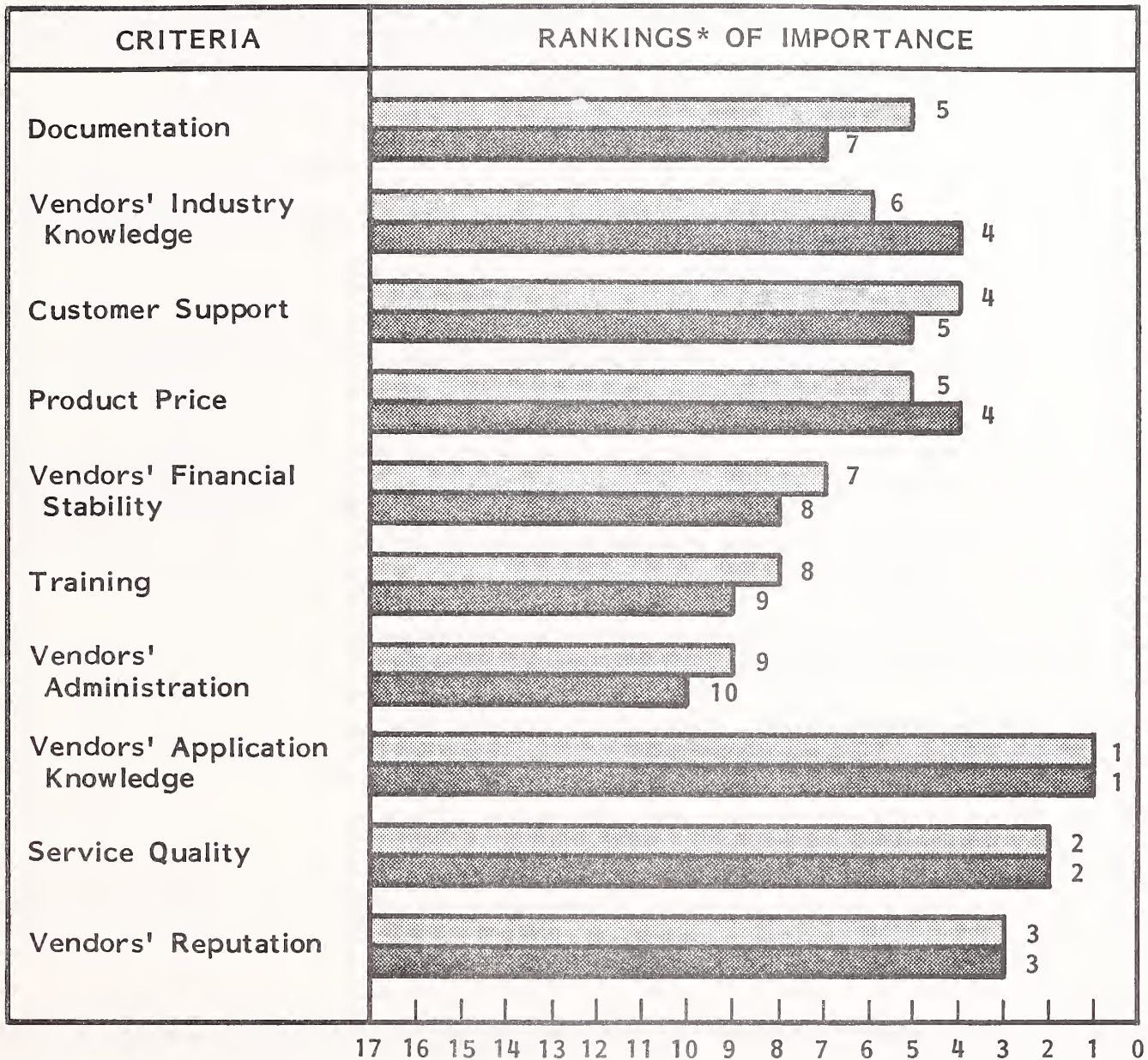


\* Rankings: 1 = Highest, 17 = Lowest



# EXHIBIT VII-6

## DIFFERENCES BETWEEN VENDORS' PERCEPTIONS AND USERS' ACTUAL RANKING OF IMPORTANCE OF PROFESSIONAL SERVICES SELECTION CRITERIA



 Users  
 Vendors

\* Rankings: 1 = Highest, 17 = Lowest

- Software performance is very important.
  - Customer support is not as important as ease of use.
  - Software flexibility is not as important as generally felt.
  - The vendor's financial stability and knowledge of the industry and of applications are more important than vendors realize.
  - Interestingly, product price is of little importance to users when selecting software. Perceptively, vendors realized this and gave it a low rating as well.
- Professional services vendors, while showing some misperceptions, were pretty much on target.
    - The vendor's application knowledge, service quality, and the vendor's reputation were rated highest by both user and vendor. Factors that are more important to customers than is realized include:
      - Documentation.
      - Customer support.
      - Vendor's financial stability.
      - Vendor's administration.
  - The factors that are of less importance to customers than vendors perceive include:

- Vendor's industry knowledge.
- Product price.

## 2. PRICE EXPECTATIONS

- Based on recent experience of the general economy, customers expect information services price increases within the range of inflation - 6-8% per year. It is likely that they will not be disappointed as software products vendors anticipate 7% increases and professional services vendors plan 13% increases.
- Vendors will need to be extremely careful to avoid unfavorable reactions from customers. These customers perceive that price increases in the past have been substantial - even though they may not have been - and are looking cautiously at vendors and their prices.
- Right now, as one user put it, "It's the only game in town." But as more opportunities are revealed and more vendors approach the same customer with similar products or services, the amount of competition will increase. As the choices of the customer become larger and the difference in products less clear, price may become a very important aspect of competition and, considering customers' recollections of price increases, some vendors may be in for a tough time. Discounting will become an increasingly larger consideration for customers trying to find the best product/services and the best deal.

## C. PRICE INCREASES

- Customers have the means to counterbalance price and, according to respondents in this study, fully intend to use them. There will be a small but visible retraction in the buying practices of customers.



- Customers will become more selective in their purchases of software products or professional services by acting on those needs that are most urgent, delaying those that are least urgent, and developing in-house some of those facilities that are important but not critical.
- The undercurrent of discontent identified in this study should be watched closely by vendors. Movement to an in-house capability and a willingness to consider the products or services of vendors who offer better prices will become more common during the mid-80s. Success during these years of rigid market change will be especially dependent upon carefully developed pricing strategies.

## APPENDIX A: DEFINITIONS



## APPENDIX A: DEFINITIONS

- INFORMATION SERVICES - The provision of:
  - Data processing functions using vendor computers (processing services).
  - The provision of data base access where computers perform an essential role in the processing or conveyance of data.
  - Services that assist users to perform functions on their own computers (software products and/or professional services).
  - A combination of hardware and software, integrated into a total system (integrated systems).

### A. REVENUE

- All revenue and user expenditures reported are available (i.e., noncaptive) revenue, as defined below.
- NONCAPTIVE INFORMATION SERVICES REVENUE - Revenue received for information services provided within the U.S. from users who are not part of the same parent corporation as the vendor.

- CAPTIVE INFORMATION SERVICES REVENUE - Revenue received from users who are part of the same parent corporation as the vendors.
- OTHER REVENUE - Revenue derived from lines of business other than those defined above.

## B. SERVICE MODES

- PROCESSING SERVICES - Remote computing services, batch services, and processing facilities management.
  - REMOTE COMPUTING SERVICES (RCS) - Provision of data processing to a user by means of terminals at the user's site(s) connected by a data communications network to the vendor's central computer. There are five submodes of RCS:
    - INTERACTIVE (timesharing) - Characterized by the interaction of the user with the system, primarily for problem-solving timesharing but also for data entry and transaction processing: the user is on-line to the program/files.
    - REMOTE BATCH - Where the user hands over control of a job to the vendor's computer, which schedules job execution according to priorities and resource requirements.
    - DATA BASE - Characterized by the retrieval and processing of information from a vendor-provided data base. The data base may be owned by the vendor or a third party.
    - USER SITE HARDWARE SERVICES (USHS) - These offerings provided by RCS vendors place programmable hardware on the user's site (rather than in the EDP center). USHS offers:



- Access to a communications network.
  - Access through the network to the RCS vendor's larger computers.
  - Significant software as part of the service.
- BATCH SERVICES - This includes data processing performed at vendors' sites of user programs and/or data that are physically transported (as opposed to electronically by telecommunication media) to and/or from those sites. Data entry and data output services, such as key-punching and computer output microfilm processing, are also included. Batch services include those expenditures by users who take their data to a vendor site that has a terminal connected to a remote computer for the actual processing.
  - PROCESSING FACILITIES MANAGEMENT (PFM) (Also referred to as "resource management" or "systems management") - The management of all or a major part of a user's data processing functions under a long-term contract (more than one year). This would include both remote computing and batch services. To qualify as PFM, the contractor must directly plan, control, operate, and own the facility provided to the user, either on-site, through communications lines, or in a mixed mode.
- Processing services are further differentiated as follows:
    - Function-specific services are the processing of applications that are targeted to specific user departments (e.g., finance, personnel, sales) but cut across industry lines. Most general ledger, accounts receivable, payroll, and personnel applications fall into this category. Function-specific data base services where the vendor supplies the data base and controls access to it (although it may be owned by a third party) are

included in this category. General-purpose tools such as financial planning systems, linear regression packages, and other statistical routines are also included. However, when the application, tool, or data base is designed for specific industry use, then the service is industry specific.

- Industry-specific services provide processing for particular functions or problems unique to an industry or industry group. The software is provided by the vendor either as a complete package or as an applications "tool" that the user employs to produce a unique solution. Specialty applications can be either business or scientific in orientation. Industry-specific data base services, where the vendor supplies the data base and controls access to it (although it may be owned by a third party), are also included under this category. Examples of industry specialty applications are seismic data processing, numerically controlled machine tool software development, and demand deposit accounting.
- Utility services are those where the vendor provides access to a computer and/or communications network with basic software that enables users to develop their own problem solutions or processing systems. These basic tools include terminal-handling software, sorts, language compilers, data base management systems, information retrieval software, scientific library routines, and other systems software.
- SOFTWARE PRODUCTS - This category includes users' purchases of applications and systems packages for use on in-house computer systems. Included are lease and purchase expenditures, as well as fees for work performed by the vendor to implement and maintain the package at the users' sites. Fees for work performed by organizations other than the package vendor are counted in professional services. There are several subcategories of software products.

- APPLICATIONS PRODUCTS - Software that performs processing to service user functions. They consist of:
  - CROSS-INDUSTRY PRODUCTS - Used in multiple user industry sectors. Examples are payroll, inventory control, and financial planning.
  - INDUSTRY-SPECIFIC PRODUCTS - Used in a specific industry sector such as banking and finance, transportation, or discrete manufacturing. Examples are demand deposit accounting and airline scheduling.
- SYSTEMS PRODUCTS - Software that enables the computer/communications system to perform basic functions. They consist of:
  - SYSTEMS CONTROL PRODUCTS - Function during applications program execution to manage the computer system resource. Examples include operating systems, communication monitors, emulators, and spoolers.
  - DATA CENTER MANAGEMENT PRODUCTS - Used by operations personnel to manage the computer system resources and personnel more effectively. Examples include performance measurement, job accounting, computer operations scheduling, and utilities.
  - APPLICATION DEVELOPMENT PRODUCTS - Used to prepare applications for execution by assisting in designing, programming, testing, and related functions. Examples include languages, sorts, productivity aids, data dictionaries, data base management systems, report writers, project control systems, and retrieval systems.

- PROFESSIONAL SERVICES - Made up of services in the following categories:
  - EDUCATION SERVICES - EDP products and/or services - related to corporations, not individuals.
  - CONSULTING SERVICES - EDP management consulting and feasibility studies, for example.
  - SOFTWARE DEVELOPMENT - Including system design, contract programming, and "body shopping."
  - PROFESSIONAL SERVICES FACILITIES MANAGEMENT (PSFM) - The counterpart to processing facilities management, except that in this case the computers are owned by the client, not the vendor; the vendor provides people to operate and manage the client facility.
- INTEGRATED SYSTEMS (Also known as Turnkey Systems) - An integration of systems and applications software with hardware, packaged as a single entity. The value added by the vendor is primarily in the software. Most CAD/CAM systems and many small business systems are integrated systems. This does not include specialized hardware systems such as word processors, cash registers, and process control systems.
- Integrated systems revenue in this report is divided into two categories.
  - INDUSTRY-SPECIFIC systems, i.e., systems that serve a specific function for a given industry sector such as seismic processing systems, automobile dealer parts inventory, CAD/CAM systems, discrete manufacturing control systems, etc.
  - CROSS-INDUSTRY systems, i.e., systems that provide a specific function that is applicable to a wide range of industry sectors such as financial planning systems, payroll systems, personnel management systems, etc.



- Revenue includes hardware, software, and support functions.

### C. OTHER CONSIDERATIONS

- When questions arise about the proper place to count certain user expenditures, INPUT addresses them from the user viewpoint. Expenditures are then categorized according to the answer to what the users perceive they are buying.
- The standard industrial classification (SIC) codes are used to define the economic activity contained in generic sectors such as Process Manufacturing, Insurance, Transportation, etc.
- The specific industries (and their SIC codes) included under these generic industry sectors are detailed in Exhibit A.





## **APPENDIX B: VENDOR QUESTIONNAIRE**



## VENDOR QUESTIONNAIRE

1. What were your company's revenues in the most recent fiscal year?

Revenues: \$ \_\_\_\_\_ (millions)

Fiscal year-end: Month \_\_\_\_\_ Year \_\_\_\_\_

2. a. What percent of your company's last fiscal year's revenues were from the following categories?

Systems Software \_\_\_\_\_%

Applications Software \_\_\_\_\_%

Professional Services \_\_\_\_\_%

Other \_\_\_\_\_%

Total 100%

- b. If other given, please describe: \_\_\_\_\_

3. Your largest service is (Interviewer, complete based on 1982 percent in question #2 above):

- ☐ Systems software  
☐ Applications software  
☐ Professional services  
☐ Other (Terminate interview.)

Therefore please answer the following questions only in regard to that service.

4. Are you directly involved in the pricing of this service?

☐ Yes ☐ No

5. If no, ask for a referral to someone who is, and terminate interview.

If yes, continue.

If professional services is checked, go to question number 20.

## SOFTWARE PRODUCTS SECTION

## PRICING STRUCTURE

6. a. What percentage of your software product packages are priced using the following methods?

Lump sum front-end price \_\_\_\_\_%

Installment purchase \_\_\_\_\_%

Annual fee/rental \_\_\_\_\_%

Other \_\_\_\_\_%

If "other" go to the next question, otherwise go to question 7.

- b. Please describe the "other" pricing method referred to in the previous question.

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- c. Do you currently have or plan to implement some form of usage or transaction pricing?

☐ Yes ☐ No

- d. If yes, please describe. \_\_\_\_\_

---



7. a. What percent of your software products revenues came from the following in 1982?

	1982	1985
Maintenance fees	_____ %	_____ %
Training charges	_____ %	_____ %
Installation fees	_____ %	_____ %
Program customization or modification	_____ %	_____ %
Packaged software	_____ %	_____ %
Other (describe) _____	_____ %	_____ %
_____		
Total	100%	100%

Other \_\_\_\_\_

- b. Please project what you think those percentages will be in 1985.

\_\_\_\_\_

- c. Please explain any significant change. \_\_\_\_\_

\_\_\_\_\_

8. Please name and describe your largest revenue-producing software package.

\_\_\_\_\_

\_\_\_\_\_

9. What percent of your company's revenues come from that package? \_\_\_\_\_ %

10. What is the price of that package? \$ \_\_\_\_\_

11. a. What percent of the price given above is charges for annual maintenance? \_\_\_\_\_ %
- b. How long ago was this charge changed? \_\_\_\_\_ and what was it then? \_\_\_\_\_ %
- c. How long will it be before you change this fee again? \_\_\_\_\_ and what do you expect to change it to? \_\_\_\_\_ %
12. a. Does your published price schedule provide hourly rates for systems analysts and/or programmers? (If no, ask if they sell these services and get rates.)  
☐ Yes ☐ No If no, ask if they sell these services and get rates: \_\_\_\_\_
- b. If yes, what are the minimum and maximum hourly rates for these professional services?
- |            | <u>Minimum</u> | <u>Maximum</u> |
|------------|----------------|----------------|
| Analyst    | \$ _____       | \$ _____       |
| Programmer | \$ _____       | \$ _____       |
13. a. Have you changed the way you price your products and services in the past 12 months?  
☐ Yes ☐ No
- b. If yes, how and why? \_\_\_\_\_  
 \_\_\_\_\_
14. a. Do you plan to change the way you price your products and services in the next 12 months?  
☐ Yes ☐ No
- b. If yes, how and why? \_\_\_\_\_  
 \_\_\_\_\_

## DISCOUNTING

15. a. What discounting from basic list prices do you provide, and on what basis?

Basis	Minimum	Maximum
Volume Discounts	_____ %	_____ %
Additional CPUs	_____ %	_____ %
Additional sites	_____ %	_____ %
Optional modules	_____ %	_____ %
Additional products	_____ %	_____ %
Term contract	_____ %	_____ %
Market segment	_____ %	_____ %
Government sector	_____ %	_____ %
Education sector	_____ %	_____ %
Other (describe) _____	_____ %	_____ %

b. Please describe the other discounting basis referred to in the preceding question.

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16. a. What percent of your software product customers buy your products at other than the basic list prices quoted in the pricing schedule? \_\_\_\_\_ %

b. What percent would you estimate for 1985? \_\_\_\_\_ %

17. What percent of your software product revenue do these "discounted" customers represent?

\_\_\_\_\_ %

18. How much did your company spend on research and development as a percent of revenues in your last fiscal year? \_\_\_\_\_ %

19. a. Do you offer software that runs on personal computers?

☐ Yes ☐ No

- b. If no, go to "e." If yes, please describe. \_\_\_\_\_

- c. What is the price, and do you offer discounts? \$ \_\_\_\_\_

- d. Who developed the software? \_\_\_\_\_

Go to question number 28.

- e. If no, do you plan in the next year to offer software for personal computers?

☐ Yes ☐ No

- f. If yes, please describe. \_\_\_\_\_

- g. Describe the price and terms you will use for the product. \_\_\_\_\_

END OF SOFTWARE QUESTIONS

Go to question number 28.

## PROFESSIONAL SERVICES SECTION

## PRICING STRUCTURE

20. a. What percentage of your professional services revenues were priced using the following methods in 1982?

	1982	1985
Time and materials	_____ %	_____ %
Fixed price	_____ %	_____ %
Cost plus fixed fee	_____ %	_____ %
Other	_____ %	_____ %
Total	100%	100%

- b. If "other", please describe. \_\_\_\_\_

- c. What will they be in 1985? \_\_\_\_\_

21. What are the minimum and maximum hourly rates for the following types of professional services?

	<u>Minimum</u>	<u>Maximum</u>
Analyst	\$ _____	\$ _____
Programmer	\$ _____	\$ _____

22. a. Have you changed the way you price your services in the past 12 months?

☐ Yes ☐ No

- b. If yes, how and why? \_\_\_\_\_



23. a. Do you plan to change the way you price your services in the next 12 months?

☐ Yes ☐ No

- b. If yes, how and why? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

24. a. Do any of your contracts have performance incentives in them?

☐ Yes ☐ No

- b. If yes, please describe objective and amount of incentive. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

25. If yes to either 23 or 24, what impact on your pricing do these incentives have

\_\_\_\_\_  
\_\_\_\_\_

#### SOURCES OF REVENUE

26. What percent of your 1982 professional services revenue came from the following sources?

Government sector \_\_\_\_\_ %

Commercial sector \_\_\_\_\_ %

## BURDENED RATES

27. a. What burdens do you apply to your professional staff hourly compensation as a percent markup over their basic cost?

	<u>Markup</u>	<u>Rating</u>
A. Fringe benefits	_____ %	_____
B. General & administrative	_____ %	_____
C. Marketing and sales	_____ %	_____
D. Facilities	_____ %	_____
E. Research & development	_____ %	_____
F. Training & education	_____ %	_____
G. Other	_____ %	_____
Total overhead burden	_____ %	

- b. If other, please describe. \_\_\_\_\_
- \_\_\_\_\_
- c. If interviewee declines to give above detail, ask for total overhead burden percentage, and then ask if he will rate them in importance to pricing on a scale of 1 to 5 where 5 is very important.

END OF PROFESSIONAL SERVICES SECTION

## SOFTWARE AND PROFESSIONAL SERVICES SECTION

## REVENUES AND PRICE INCREASES

28. What average percentage revenue increases have you had over the last two years, and what are you projecting for the next two years?

1980-1982 \_\_\_\_\_%      1983-1984 \_\_\_\_\_%

29. What portion of those increases would you attribute to price increases? (This should be expressed as a percent of the above.)

1980-1982 \_\_\_\_\_%      1983-1984 \_\_\_\_\_%

30. a. What were your company's pretax profit margins in the previous three fiscal periods?

1982 \_\_\_\_\_%      1981 \_\_\_\_\_%      1980 \_\_\_\_\_%

If interviewee declines to answer this question, ask the following:

- b. Have your profit margins been improving over that period?

☐ Yes      ☐ No

- c. In the last period (1982), compared to your industry's average profit margins, were your margins:

☐ above average?

☐ average? (software - 18%, professional - 6%)

☐ below average?

## CUSTOMER PURCHASING ATTITUDES

31. a. Your prospects are motivated by a number of factors when they consider buying your product. Please rate the following factors in importance to your prospects' selection process on a scale of 1 to 5 where 5 is high and 1 is low.

- A. Product price \_\_\_\_\_
- B. Service quality \_\_\_\_\_
- C. Vendor's reputation \_\_\_\_\_
- D. Vendor's financial stability \_\_\_\_\_
- E. Vendor's administration (billing, etc.) \_\_\_\_\_
- F. Vendor's application knowledge \_\_\_\_\_
- G. Vendor's knowledge of customer industry \_\_\_\_\_
- H. Customer support \_\_\_\_\_
- I. Training \_\_\_\_\_
- J. Documentation \_\_\_\_\_

- b. Professional services, go to c. Software vendors only rate the following factors.

- K. Software features and functionality \_\_\_\_\_
- L. Software performance \_\_\_\_\_
- M. Software flexibility \_\_\_\_\_
- N. Ease of implimentation \_\_\_\_\_
- O. Ease of use \_\_\_\_\_
- P. Product family \_\_\_\_\_
- Q. Vendor's commitment to maintain product \_\_\_\_\_

c. Which is the most important factor and why? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

32. What percent change do you believe your clients expect in prices for your product or service?

	Balance of		
	1983	1984	1985
Percent change			
(up or down)	%	%	%
	_____	_____	_____



## PRICING PRACTICES AND PROCESS

33. a. Based on how closely the following pricing objectives match your objectives when pricing your products, please rate the following on a scale of 1 to 5 where 5 is an excellent match and 1 is irrelevant.

- A. Target profit return \_\_\_\_\_
- B. Attain satisfactory profit \_\_\_\_\_
- C. Maximize profits \_\_\_\_\_
- D. Maintain market share \_\_\_\_\_
- E. Increase market share \_\_\_\_\_
- F. Increase revenues \_\_\_\_\_
- G. Meet competition price \_\_\_\_\_
- H. Value price \_\_\_\_\_

- b. Which is most important? \_\_\_\_\_

34. a. There are a number of cost factors that contribute to the price of products and services. Please rate the following factors in terms of their importance to your pricing policies (1 = low, 5 = high)

- A. Sales/marketing cost \_\_\_\_\_
- B. Customer support cost \_\_\_\_\_
- C. Research & development cost \_\_\_\_\_
- D. Administrative overhead cost \_\_\_\_\_
- E. Hardware cost \_\_\_\_\_
- F. Training and education \_\_\_\_\_
- G. Profit allocation \_\_\_\_\_
- H. Other (describe) \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

- b. Which is the most important? Why? \_\_\_\_\_

\_\_\_\_\_

35. a. Do you sell any of your products through distribution channels other than direct sales?

☐ Yes ☐ No

- b. If yes, describe and explain why you are doing this. \_\_\_\_\_

\_\_\_\_\_

36. a. Do you plan to change the way you distribute your product?

☐ Yes ☐ No

- b. If yes, how and why? \_\_\_\_\_

\_\_\_\_\_

- c. How will this affect your pricing? \_\_\_\_\_

\_\_\_\_\_

Thank You.

## APPENDIX C: USER QUESTIONNAIRE



## USER QUESTIONNAIRE

1. What were your company's/division's revenues in the most recent fiscal year?

Revenues: \$ \_\_\_\_\_ millions

Fiscal Year End: Month \_\_\_\_\_ Year \_\_\_\_\_

2. What were your company's expenditures on EDP for the same period?

By the DP organization \$ \_\_\_\_\_ millions

By non-DP departments \$ \_\_\_\_\_ millions

3. What were your company's expenditures for the same period for these services?

Systems software \$ \_\_\_\_\_

Applications software \$ \_\_\_\_\_

Professional services \$ \_\_\_\_\_

Total \$ \_\_\_\_\_

4. a. Are you a decision maker on the purchase of:

- ☐ A. Systems software  
☐ B. Applications software  
☐ C. Professional services  
☐ D. None of the above. Terminate interview.

- b. If both A and B are selected, ask which he/she is most directly involved with.

- ☐ A. Systems  
☐ B. Applications

All the software questions should be answered only in reference to this type of software.

- c. If C is also selected, ask professional services questions; if not, skip that section. If C is the only selection, go to question #18.



## SOFTWARE PRODUCTS SECTION

## PRICING STRUCTURE

5. a. How many of your software product packages purchased during the past two years were priced using the following methods?

Lump sum front-end price \_\_\_\_\_

Installment purchase \_\_\_\_\_

Annual fee/rental \_\_\_\_\_

Other (list and describe)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Total

\_\_\_\_\_

- b. Do you pay for software by some form of use or transaction pricing?

☐ Yes

☐ No

- c. If yes, please describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6. a. What percentage of your software products expenditures were for the following in 1982?

1982

Maintenance fees \_\_\_\_\_ %

Training charges \_\_\_\_\_ %

Installation fees \_\_\_\_\_ %

Program customization or  
modification \_\_\_\_\_ %

Packaged software \_\_\_\_\_ %

Other (describe) \_\_\_\_\_ %

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Total \_\_\_\_\_ 100 %

7. Please name and describe your most important purchased software package.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

8. a. What was the price of that package? \$\_\_\_\_\_.

- b. On a scale of 1 to 5 where 5 is high, do you believe you got a good value for the price you paid? \_\_\_\_\_

- c. Why? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

9. a. What percent of the price given above is charged for annual maintenance?

\_\_\_\_\_ %

- b. How long ago was this charge changed? \_\_\_\_\_

What was it then? \_\_\_\_\_ %

- c. On a scale of 1 to 5 where 5 is high, do you believe you are getting good value for your maintenance fee?

Rating \_\_\_\_\_

- d. How much would you be willing to pay as a percent of purchase price to get "5" level service?

Fee percent \_\_\_\_\_ %

- e. Have you considered changing the way you process this application because of the maintenance fee changes?

☐ Yes ☐ No

How? \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

10. a. What has been the price trend on software purchase prices in the past year?

☐ Up ☐ Down \_\_\_\_\_ %

- b. In the next year, change by what percent? \_\_\_\_\_ %

- a. Have the changes in software prices caused you to look at alternatives?

☐ Yes ☐ No

- b. If yes, please describe. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## DISCOUNTING

12. a. On major packages you've bought in the last two years what discounting from basic list prices did you receive, and on what basis?

	Minimum	Maximum
Dollar volume	_____ %	_____ %
Additional installations (CPU)	_____ %	_____ %
Additional site	_____ %	_____ %
Optional modules	_____ %	_____ %
Additional products	_____ %	_____ %
Term contract	_____ %	_____ %
Market segment	_____ %	_____ %
Government sector	_____ %	_____ %
Education sector	_____ %	_____ %
Other	_____ %	_____ %

- b. Please describe the other discounting basis referred to in the preceding question.

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13. a. How many software packages did you purchase during the last two years?

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- b. How many of the software package purchases during the last two years were at less than retail prices?

---

- c. What percent of your software product expenditures are at other than the basic list prices quoted in the pricing schedule?

\_\_\_\_\_ %

14. a. Do any of your software vendors offer other versions of their software for personal computers?

☐ Yes ☐ No

- b. Please describe, and tell how they are charging you for it:

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- c. Do you like this pricing approach?

☐ Yes. Why? 

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☐ No. Why not? 

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## PURCHASING AUTHORITY

15. How much can you spend on software without higher level approval? \_\_\_\_\_
16. a. What is the next level of approval? Give title or position.  
\_\_\_\_\_
- b. How much can he/she approve? \_\_\_\_\_
17. a. Who must sign off on purchases of software? Give title or position.  
A. \_\_\_\_\_  
B. \_\_\_\_\_  
C. \_\_\_\_\_  
D. \_\_\_\_\_
- b. Who is most important and why? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## END OF SOFTWARE QUESTIONS

If a user of professional services, continue; otherwise go to question #22.

## PROFESSIONAL SERVICES SECTION

## PRICING STRUCTURE

18. a. What percentage of your professional services purchases were priced using the following methods in 1982?

1982

Time and materials \_\_\_\_\_ %

Fixed price \_\_\_\_\_ %

Cost plus final fee \_\_\_\_\_ %

Other \_\_\_\_\_ %

- b. If other, please describe. \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

19. What are the minimum and maximum hourly rates you pay for the following types of professional services?

	Minimum	Maximum
Analyst	\$ _____	\$ _____
Programmer	\$ _____	\$ _____

20. a. Do you plan to change the way you use professional services in the next 12 months?

☐ Yes      ☐ No

- b. If yes, how and why? \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

21. a. Do any of your contracts have performance incentives in them?

☐ Yes      ☐ No

- b. If yes, please describe objective and amount of incentive. \_\_\_\_\_
- \_\_\_\_\_

## SOFTWARE AND PROFESSIONAL SERVICES SECTION

## CUSTOMER PURCHASING ATTITUDES

22. a. You are motivated by a number of factors when you consider buying a product. Based on importance to you when you select a new software product, please rate the following factors on a scale of 1 to 5, where 5 is high and 1 is low. (Interviewer, ask only for relevant service.)

	Applications Software	Systems Software	Professional Services
A. Product price	_____	_____	_____
B. Service quality	_____	_____	_____
C. Vendor's reputation	_____	_____	_____
D. Vendor's financial stability	_____	_____	_____
E. Vendor's administration (billing, etc.)	_____	_____	_____
F. Vendor's application knowledge	_____	_____	_____
G. Vendor's knowledge of your industry	_____	_____	_____
H. Customer support	_____	_____	_____
I. Training	_____	_____	_____
J. Documentation	_____	_____	_____

- b. Professional services, go to d. Software buyers only, rate the following factors.

K. Software features and functionality	_____	_____	_____
L. Software performance	_____	_____	_____
M. Software flexibility	_____	_____	_____
N. Ease of implementation	_____	_____	_____
O. Ease of use	_____	_____	_____
P. Product family	_____	_____	_____
Q. Vendor's commitment to maintain package	_____	_____	_____

- c. Please rate same factors for professional services selection.

22. d. Which is the most important factor and why?

Applications \_\_\_\_\_

Systems \_\_\_\_\_

Professional \_\_\_\_\_

23. What percentage change do you believe your vendors will make in prices for their product or services?

Percent change (up or down)	Balance of		
	1983	1984	1985
Systems software	_____ %	_____ %	_____ %
Applications software	_____ %	_____ %	_____ %
Professional services	_____ %	_____ %	_____ %

THANK YOU

## APPENDIX D: RELATED INPUT REPORTS





## APPENDIX D: RELATED INPUT REPORTS

- Opportunities for Engineering and Scientific Remote Computing Services, 1983.
- Information Services Pricing Trends and Techniques (Volume I: Processing Services and Integrated Systems), 1983.
- Market Opportunities in Sales, Marketing, and Distribution Applications, 1983.
- Personal Computer Opportunities for Remote Computing Services Vendors, 1983.
- Successful Marketing Methods That Boost Sales, 1983.
- Trends in Computer Services Pricing, 1980.
- Trends in Services and Software Pricing, 1978.





